The Journal of the American Pharmaceutical Association

Volume I FEBRUARY, 1912 No. 2

Office of Publication, 79-89 North Third St., Columbus, Ohio.

Subscription, $3.00 per annum, within the United States. To Canada, $3.35. To other foreign countries in Postal Union, $3.50 per annum. Single copies, twenty-five cents.

Entered at the Postoffice at Columbus, Ohio, as Second-Class matter.

Papers and communications for insertion in the JOURNAL should be sent to the Editor, James H. Beal, Scio, Ohio. Subscriptions should be sent to the Treasurer, H. M. Whelpley, 2342 Albion Place, St. Louis, Mo.

The Association does not accept the responsibility for the opinions of contributors. Offensive personalities must be avoided.

ASSOCIATION RESPONSIBILITY.

"I DID not like a statement made by your president in his annual address at the —— convention, so I dropped my membership and since then have used my influence against the association."

Probably every pharmaceutical association in the United States, local, state or national, has been similarly condemned because of the real or fancied offense of some of its members.

What a just and sapient decision! Because some one member or official chances to disagree with the individual on a question of policy, the whole association is to be condemned!

It may be that the seceding individual is enjoying increased rank or pay, or that the laws under which he does business have been materially improved, or that his business has been increased, or that he is able to obtain better prices for his goods because of the unselfish labors of this same association, but no matter, one member having offended, all have offended!

No doubt this aggrieved individual has frequently declaimed at the injustice of muck-raking newspapers which hold all druggists to be booze sellers and substitutors because a few have been proved to be such, but he makes himself guilty of the same offense when he summarily condemns a whole association for the faults of a few members.

In trying to imagine the mental condition which would lead a member to such an unjust and unreasonable decision the following suggest themselves:

One cause may be mere peevishness of temper, or an unwillingness to allow to

other members the same freedom in action and expression of opinion that he would claim for himself. We have frequently noticed that people who are freest in the criticism and condemnation of others themselves have sensibilities as delicate as Job's tenderest furuncle. These are infirmities of temperament, and while we condemn, we must also pity those who are thus afflicted.

Another reason may be the member's desire to have an excuse for altogether repudiating his obligaations to a society which has a just claim upon his loyalty and service. The disposition and character of one who is willing to accept the benefits of services rendered at a sacrifice by others, while evading his just proportion of the financial and other burdens, cannot be properly described in printable language, and more need not be said.

The third and most probable explanation is that the complaining member has totally misconceived the relation of a voluntary society to its members, and its power to coerce their actions. When this is the cause there is hope that he will, upon reflection, revise his unjust judgment and again become a loyal and useful member of the society.

In the case of a commercial corporation, the acts of an agent may be regarded as probably reflecting the predetermined policy of the whole, because the directorate of such a body can say to its servant, "Do this," and "he does it"; but in the case of a voluntary association when the same command is given to a member, he may do it or not, as it suits him.

A voluntary association is a combination of people who desire to act together in the furtherance of a common object or policy. What this object or policy shall be is determined by the consensus of opinion expressed by formal resolutions, or by a course of conduct so uniform and so long continued as to justify the belief that it represents the will of the majority. It is not determined by the isolated acts or statements of individual members, or even by officials, for over these the association can exert only a moral influence, and can enforce its commands only within wide and very generous limits.

While we are upon this subject of responsibility why not turn the question "end for end," and consider the responsibility of the member to his association? Whether the association is large or small, local or national, the chances are that it has done far more for him than he has ever done for it.

After many years of observation of association work, the writer is fully persuaded that every druggist who is eligible should be and can afford to be, if not an active, at least a supporting member of his local and of both the great national associations—more than this, that he cannot afford not to be a member of these.

What do the extra dues amount to when compared to the magnitude of the work to be done? Why should the great burden of reformatory and constructive work be borne by a few? If the active members give liberally of their time, energy and money for the development of better conditions in pharmacy, why should the inactive ones grudge the help of a few paltry dollars? For very shame they should tender their dues voluntarily, together with their apologies for not being able to do more of the active work themselves!

Shall the man engaged in pharmaceutical work, and who claims to be at least a semi-professional man, be shamed by the member of the hod-carriers' or bricklayers' union?

Who will fight his battles for him if the associations do not? If the laws are insufficient or unjust, what forces will secure their correction if not the associations? If he is suffering from unfair discrimination by another and more powerful branch of the trade, who will procure fair treatment for him if not the associations? If his business is being unjustly invaded by unqualified persons, upon whom can he rely to bring about the enactment of legislation to confine the sale of drugs to those whom the law requires to be qualified, if not upon the associations?

If he thinks he can accomplish any one of these things without the aid of organization, let him go before the State Legislature, or Congress, or other branches of the trade, as an individual, and thus realize what an insignificant grain of human sand he is when he attempts to act singly. Let him make but one such effort and he will ever after be a loyal and enthusiastic association man.

J. H. BEAL.

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THE UNQUALIFIED MEDICINE VENDOR.

THE greatest hole in the average pharmacy act is that provision which permits the unqualified vendor to sell what are known as the "ordinary" or "household" drugs and medicines, a clause which is generally interpreted to mean that he may sell almost anything not recognized by the laity as dangerously poisonous—as well as some that are so recognized—and including the greater portion of the articles which are to be found in the druggist's stock.

Are we justified in hoping that public opinion will ever sufficiently change from its present state of indifference, founded mainly on misinformation, to permit the closing of this legal aperture?

If we appeal to the memories of those whose generation reaches beyond the earlier pharmacy acts we shall learn that the enactment of these first laws, feeble as they were, at one time seemed as improbable as the checking of the unqualified vendor seems now. May we not reasonably hope therefor that public opinion will continue to advance until it will favor legislation that will provide real and adequate safeguards for the public health.

Is there any real argument, except the selfish one, in favor of the legal restriction of the sale of medicines—those which are alleged to be harmless as well as those which are admittedly dangerous—to the registered pharmacist?

The vendor of ordinary varieties of merchandise must meet the competition of all comers, why should not the vendor of medical merchandise do likewise?

The two cases, however, are not at all parallel. If a citizen desires to establish a grocery or hardware store the only authority to be reckoned with is the credit man of the wholesaler from whom he expects to receive his supplies. If, however, he desires to practice pharmacy he must reckon not only with his jobber, but the law steps in and declares that, in the interest of public safety, he must serve a certain number of years of apprenticeship, and that finally he must satisfy a keenly critical examining board as to his fitness to safely compound and dispense drugs and medicines. If this heavy burden of educational preparation and experience is laid upon the man who calls himself a druggist, why should it not be equally imposed upon all who vend drugs and medicines?

"But," says the objector, "why not restrict the handling of strychnine, arsenic and other dangerously poisonous substances to the educated and trained pharmacist, but let any one who chooses to do so handle patent medicines and ordinary and non-poisonous drugs?"

Why not indeed? Why not pay the policeman for his time only when he prevents a murder or a crossing accident and let him stand watch and ward during the remainder of the time at his own expense?

Why not pay the fireman for the time spent in extinguishing a fire, and let him be on hands at the station house between fires at his own cost and keep; or why not pay premiums to the insurance companies only when there is a fire, and let them carry the policy at other times for nothing?

The necessity for supporting the qualified vendor of poisons and dangerous chemicals is the same as the necessity of supporting the policeman, the fireman and the insurance company—that they may be on hand when wanted.

If the unqualified vendor may handle the greater portion of the medicinal articles of the druggist's stock on the plea that they are non-poisonous, what is there left for the druggist to sell? Certainly not enough in the form of highly dangerous drugs to justify the long and expensive preparation which the law exacts.

But are there any strictly harmless drugs and medicines, or any the unrestrained and incautious use of which may not be dangerous to the user? If there are any such their names are as yet unknown to the student of materia medica.

While the activity of drugs may vary through an infinite number of degrees, it may be accepted as a general rule that whenever the activity is sufficient to produce a decided therapeutic effect in disease, it is sufficient to produce a deleterious effect when improperly used, either as to time or quantity.

If space permitted, many other reasons might be given for restricting the prescribing and dispensing of *all* drugs and medicines to those who have been properly trained to exercise these respective functions, and when doctors and druggists are willing to lay aside their foolish antagonisms and work together the day will not be far distant when the law will contain such provisions.

J. H. BEAL.

Contributed and Selected

REASONS FOR PROMOTING THE STATUS OF THE HOSPITAL CORPS OF THE UNITED STATES ARMY.

GEO. F. PAYNE.

We wish to see remedied as far as possible the present and long standing condition which makes it actually impossible to secure for the Medical Department the class of men necessary for the efficient performance of duties connected with the care of the sick and the sanitary service in general. Inasmuch as all branches of the army are practically in competition with each other for men possessing the necessary qualifications, it is obvious that efficiency can only be maintained by offering equal opportunities for advancement in all branches, or, as in this case, by a compensatory increase in the rate of pay in those branches in which the noncommissioned grades are relatively few in number as compared with other corps.

Prior to the Act of May 11, 1908, the privates first class of the Hospital Corps received $5.00 per month more than privates of the line of the army. It appears to have been recognized by Congress that the work of the Hospital Corps was not only arduous and confining, but that, involving as it does the care of the sick and wounded, the compounding of drugs, etc., it was extremely technical and responsible, and that to secure the class of men who met the requirements indicated, it was necessary to offer some better inducement than the pay of a private soldier. The Act of May 11, 1908, gave no increase in pay to the private first class, Hospital Corps, while the pay of other soldiers was increased *from 20 to 80 per cent with the sole exception of the Hospital Corps.* About 12 per cent of the total strength have the grade of corporal at $24.00 per month on first enlistment, while in the Hospital Corps the proportion of corporals to the total strength is but 1.42 per cent. Plainly therefore the opportunity for advancement for the privates of this corps are about ten times less than in other staff departments. In actual figures the difference against the Hospital Corps amounts to the loss of 400 corporals; there being in this corps but fifty corporals (or 1.42% of its total), while on the basis which prevails in other staffs—the Signal Corps for example (12.88%)—there would be 450. It requires no elaborate argument to show that the loss of promotion which would be possible with 450 corporals has a most serious effect on the class of men who enlist for the lower grades—those of private and private first class. To a great extent the Hospital Corps is now compelled to accept men who realize their inability to make good in other branches where, the prospects of advancement being so much better, there is a far wider field from which to make a selection. It follows, therefore, that unless legislation can be enacted which will give to the Hospital Corps the same pro-

portionate number of corporals as in other corps, that there must be some compensatory increase in the pay of the privates first class. The increase requested is $3 per month, which will make the pay of this grade $21 instead of $18. It is observed, in passing, that the farrier, who, under the direction of the veterinary surgeon, cares for sick mules and horses now receives $21, a higher wage than that now paid the Hospital Corps privates, first class, who, under the direction of the medical officers, care for the sick soldier or officer.

The sergeants of the Hospital Corps now actually receive less pay than any other non-commissioned officers of the same grade in any branch of the service. Their flat pay is $30 per month, without the opportunity to qualify in marksmanship, gunnery, or so-called special ratings, as in other branches; these qualifications add from $2 to $9 per month to the flat pay of sergeants in all other branches. In the Signal and Coast Artillery Corps, the sergeant and second class electrician sergeant respectively, who may fairly be compared with the sergeants of the Hospital Corps, receive $36 flat pay.

To obtain the position of sergeant in the Hospital Corps, the soldier is required to qualify in a written examination in pharmacy, materia medica, care of sick, elementary hygiene, arithmetic, minor surgery and hygiene, and is, in addition, examined orally in army regulations, nursing, practical pharmacy, clerical work, drill, minor surgery, including extraction of teeth. In other branches, an examination of relatively equal scope and difficulty is required only of sergeants and second class electrician sergeants of the Signal and Coast Artillery Corps, and their pay is $36, as compared with $30 of the Hospital Corps sergeants.

The duties of the Hospital Corps sergeants are arduous, confining and responsible. In the compounding of prescriptions alone, he assumes a responsibility which merits adequate remuneration. In the pay increase of 1908 sergeants of infantry, cavalry and artillery received an increase of 65%; the sergeants of the Hospital Corps received an increase of 20%. It is proposed in accompanying bill to pay the sergeants of the Hospital Corps $36, as in the case of Signal Corps sergeants and second class electrician sergeants. Considering the long hours of duty and nature of the work devolving upon them, it is believed that the proposed equalization is not only necessary, in the interests of the sick, but also just to the corps.

The grade of pharmacist at $75—corresponding to that of master signal electrician and master electrician—is created by this bill with the object of placing the Hospital Corps on a basis of equality with other branches and offering to the noncommissioned officers of this branch opportunities equal to those obtainable in others. This course is necessary if the medical department is to secure its quota of the best and most desirable soldiers. At the larger hospitals it is necessary, as there will be found five or six sergeants first class all receiving the same rate of pay, although the senior carries the responsibility for his juniors. The work of such a man requires highly technical training and considerable ability; such men will not at present enlist in the Hospital Corps because they realize the better opportunities open to them in other branches. The grade of pharmacist exists in the navy and in the Marine Hospital service at a far higher rate than that proposed for the army.

An increase of $15 per month (from $50 to $65) is proposed for the sergeants

first class. The proposed rate equals that of the engineer in the coast artillery. What has been said about the qualifications, duties and responsibilities of the sergeants of the Hospital Corps applies with greater force to the sergeants first class. The latter are selected by competitive and searching examination from the best qualified sergeants; they perform the duties of pharmacists, clerks, storekeepers, disciplinarians, anesthetists and are practically continually on duty and at work. The sick soldier is sick quite as much at night as during the day and it is the function of the sergeants first class and sergeants to nurse and supervise the nursing of the sick. The sergeants first class are practically the house surgeons, pharmacists and chief nurse combined, of our military hospitals.

Alone of all noncommissioned officers of the army, the sergeants first class are subject to re-examination professionally every three years. This fact alone compels these men to devote to study the majority of the few hours of spare time which others can devote to amusement. Under present conditions the sergeants first class are all on the same level of pay; there is no reward for exceptional qualifications or merit. In this respect the Hospital Corps differs from any other branch of the army and with a most unfavorable result.

The duties of the Hospital Corps in the field are even more arduous than in garrison. The work of driving an ambulance filled with sick is, for example, quite as important as driving a wagon loaded with forage. Yet the wagon driver receives $40 if a civilian and $21 if a soldier; while the Hospital Corps private receives but $16 or $18.

In the navy the first class hospital apprentice corresponding to first class private Hospital Corps, receives $33 as compared with $18 in the army.

The privates of today are the noncommissioned officers of the future; it is a military axiom that good noncommissioned officers—men trained in their specific duties—are absolutely necessary for military efficiency. It follows that if the Hospital Corps cannot obtain good material for privates the quality of its noncommissioned officers will decline. The private soldier seeks and obtains his reward to noncommissioned rank—that of corporal, sergeant, etc., and without some improvement in the pay of those and other grades, it is evident that men competent to become noncommissioned officers will not enter the Hospital Corps.

The soldier, whether officer or enlisted man, has practically no voice in the selection of his nurse or pharmacist; the national government provides both and whether skilful or otherwise, the soldier must perforce be content. The functions of the nurse and of the pharmacist are too responsible to be entrusted to men of a low order of intelligence or who lack appreciation of the responsibilities of their duties. It is a matter of official record in the War Department, as reported by numerous medical officers, whose interests are purely professional and humanitarian, that the morale and quality of the Hospital Corps are a progressively declining factor. The outcome is obvious and requires no comment.

Following the custom in all branches of the army, it is proposed to change the designation Hospital Corps to Medical Corps. The Hospital Corps is the only branch in which the soldier belongs to one corps and the officer who immediately commands him, to another. The present arrangement has nothing to commend it and much to criticise. It is unwieldy, administratively cumbersome and inhibits the development of that espirit de corps which is maintained in other branches.

The National Guard under certain conditions becomes an actual portion of the United States Army, and the above arguments apply with equal force to its members, hence the pharmacists of the whole country are deeply interested. This matter is a serious one, for even during actual hostilities more men die in the United States Army from sickness than from the missiles of the enemy, which shows how very important is the promotion of the efficiency of the Hospital Corps.

BETTER PAY DESERVED BY THE ARMY HOSPITAL CORPS.

"The decline in efficiency of the Hospital Corps of the United States Army has been made the subject of an official report by the surgeon-general to the chief of staff. As a result, the American Pharmaceutical Association has taken up the cause of the military pharmacists and proposes to urge legislation which will increase the efficiency of the Hospital Corps, in accordance with the recommendation of the surgeon-general. The functions of this corps range from those of kitchen helper to those of the trained nurse; it includes the pharmacist, clerk, photographer, ambulance driver and orderly. The nursing of the sick, the sterilization of instruments and dressings, the compounding of medicines—all the details of an intricate system of property accounting and sick records are in the hands of the members of the corps. They are the only nurses at army hospitals, except at four or five general hospitals in the United States and in the Philippines.

"The federal government is under a moral, if not a legal, obligation to furnish efficient and capable nursing and pharmaceutical service to the army. The government should also set an example in the organization and service of its hospitals. The sick soldier should not be left to the untrained and incompetent. From the privates of the Hospital Corps are drawn its non-commissioned officers. If the privates are not carefully selected men of education and reliability, the non-commissioned officers will not be much better. Supervision of military hospitals, the sick, the attendants and the equipment requires no slight qualifications. When to this is added proficiency in pharmacy, nursing and minor surgery it is evident that the government must offer better inducements if it expects to obtain men with the necessary ability.

"The Army Pay bill of 1908 gave increased pay to the various grades, averaging 40 per cent and in some cases as high as 80 per cent increase. It gave the Hospital Corps not more than 20 per cent increase, thus placing it at a decided disadvantage in attracting the best class of privates. All the branches of the army are practically in competition with one another for educated and reliable men. The more intelligent the man, the more carefully he considers and selects the branch of service which offers the best inducements in pay and in opportunity for advancment. In these respects, the Hospital Corps today is the lowest of any branch of the service.

The Surgeon-General of the Army submitted a memorandum to the Chief of Staff, August 3, looking to a modest increase in the pay of the Hospital Corps, an increase rendered necessary by the practical impossibility of obtaining men of any description for this branch of the service. The surgeon-general is held responsible for the health of the army and the efficiency of its medical service.

His opinion is that of an unprejudiced expert. The Chief of Staff of the Army, himself a trained physician of no mean professional attainments, will, we hope, agree with the surgeon-general. There should be no opposition from any quarter to legislation that would remedy an obviously dangerous condition. The American Medical Association, no less than the American Pharmaceutical Association, is interested in the needs of the Hospital Corps of the Army and its members should give such assistance as is in their power to aid in the passage of a bill increasing the pay of the Hospital Corps."—*Jour. Am. Med. Association.*

DRUG QUALITY DURING THE PERIOD 1906-1911.

A. R. L. DOHME AND HERMAN ENGELHARDT.

We have felt that statistical data, based on a continuous examination over a period of six years, of three of the principal crude drugs used in this country, might prove of interest to chemists in view of the growing importance of the Pure Food and Drugs Act. For this reason we have collated the results of the assays and tests of these drugs we have made in the laboratories of Sharp & Dohme during that period of time and present them in this paper. The quality of the wild-grown plants depends largely upon atmospheric as well as upon soil conditions of the country where grown. Thus it is pointed out by a large German drug house that not much could be expected from the forthcoming crop of drugs, inasmuch as but little snow had fallen last winter in Europe, that the roots had in consequence been exposed to severe cold weather, and suffered from lack of moisture in the spring; added to this came an extremely hot almost rainless summer in which the growth of the surviving plants was greatly retarded. As but few crude drugs are cultivated as yet anywhere in the world, these uncertainties in extent of crop, and quality of product will continue until such time as raising crude drugs will become as much a business as raising cereals or fodder. The efforts now being made by the Bureau of Plant Industry of the Department of Agriculture under the capable guidance of Dr. Rodney H. True will, if continued, soon make this country more or less independent of other countries in many drugs as well independent of failures of crops or poor climatic conditions. We cannot refrain from expressing the hope that something be done to eliminate the largely used drug Golden Seal from the itching palms of money lenders, because it can truly be said of this drug that it is in the hands of a trust and an unscrupulous one at that. To think of being compelled to pay four dollars and more a pound for a wild and freely growing plant indigenous to this country when it can easily and profitably be raised for less than a dollar a pound, only accentuates the fact that the Sherman law may even be made applicable to crude products of nature. Below follow the results obtained by us in the examination of samples of the drugs offered us by dealers and gatherers in this and other countries.

The samples of *Aconite Leaves,* a drug which is very seldom used, and which, consequently, has been deleted from the U. S. P., showed up very well, only one

sample was below the usual strength (about 0.4%), assaying only 0.24% of ether-soluble alkaloids.

Aconite Root. This drug did not vary very much in the percentage of ether-soluble alkaloids.

Asafetida. It seems to be extremely difficult to obtain a drug which answers the requirements of the U. S. P. The following figures speak for themselves.

	1906	1907	1908	1909	1910	1911 (up to 10/1)
Samples and shipments examined.....	1	1	28	31	40	18
Deficient in alcohol solubility.....	1	0	8	17	24	13
Excess of ash.....	1	0	18 (64.5%)	20 (64.5%)	34 (85%)	17 (95%)
Deficient in alcohol solubility and excess of ash.....	1	0	9	15	23	13

From the above table it is clearly shown that the allowance of more than 15% ash, acted upon by the Government, had a great influence on the inferiority of the drug since the number of samples with an excessive percentage of ash during 1908 and 1909 was increased from 64% to 85% and even 95%. That in some years the conditions are very favorable for the growth of medicinal plants while in other years they are less favorable can be shown by the alkaloidal strength of *belladonna leaves* and *belladonna root*. In 1907 and 1908 we had to reject 26 and 26.5 per cent of the samples of belladonna leaves submitted, on account of deficiency in alkaloids, and in 1910 even 36%. In 1906 only 14% were of inferior quality, and in 1909, which seems to have been the most favorable year for this drug, the rejections dwindled down to only 5%. The samples examined averaged about forty a year.

The rejected samples of belladonna root were more numerous, but this inferiority is due to the excessive standard adopted by the U. S. P. The standard of 0.5% of total mydriatic alkaloids is met only with a limited number of samples. It has, however, been advocated to reduce the standard, and it would be very wise to do so, say to 0.4%. In 1906 53.5%, in 1907 65.5%, in 1908 54%, in 1910 63%, and in 1911 76% of the samples were below the official strength. In 1909 which, as already pointed out, was very favorable for belladonna, the rejections amounted to 39.5% only. It may be mentioned here, that all those samples were rejected which did not assay 0.5% or more of total mydriatic alkaloids. A large percentage assayed between 0.4% and 0.5%, and only a few had to be rejected as assaying below 0.4%.

Calabar Bean. This drug assayed during the last two years 0.15% of ether-soluble alkaloids, while in the years previous beans with as high as 0.31% could easily be bought.

Cinchona Calisaya and Cinchona Rubra. It is surprising how many samples of cinchona calisaya were below the official standard. In 1906 42%, in 1907 38%, in 1908 60%, in 1910 33.2% of the samples submitted assayed below 5% of total alkaloids, and only in the years 1911 and 1909 did the rejections amount to lower figures, 20% and 16.7% respectively. While, however, during the first three years samples with 2% of total alkaloids and even less were not infrequent,

such inferior drugs seem to be no longer present on the market, and only occasionally have samples with 3.5% total alkaloids been found during the last three years. The alkaloidal strength of red cinchona was decidedly higher. All the samples submitted during 1906, 1908 and 1911 came up fully to the official strength, of those submitted in 1907 20%, in 1909 (35 samples examined) 8.6%, and in 1910 10% were rejected.

Coca. This drug assays always in the neighborhood of 1% ether-soluble alkaloids, and very rarely was there an occasion to reject samples. Only during the last year has the alkaloidal strength dropped somewhat, when several shipments assayed only between 0.7 and 0.8%.

Colchicum Root. The conditions up to 1909 seem to have been favorable for the growth of colchicum, only 16.5% of the samples examined being below the official strength, while in 1910 68% of the samples had to be rejected as inferior.

Colchicum Seed. Although the present official assay method gives entirely too high results, as has been pointed out on various occasions, the greater percentage of the samples submitted did not come up to the standard obtained by this method. In 1906 every sample was below the required strength of 0.5% of so-called colchicine. In 1907 50%, in 1908 50%, in 1909 78%, in 1910, 86%, and in 1911 55% of the samples had to be rejected. Apparently a standard of 0.4% would be advisable.

Conium Seed. Almost all the samples answered the U. S. P. strength.

Conium Leaves. Up to date not a single sample has been submitted which contained any appreciable amount of alkaloids.

Cubebs. There was hardly any variation in the percentage of oleoresin in the cubebs examined during the last six years.

Ergot. A distinctly better quality of this drug was put upon the market during the last three years, the rejected samples, i. e., those which contained less than 0.2% of cornutine, amounting to 23%, 26.5% and 16% in 1909, 1910 and 1911 respectively. During the three years previous to this period we were compelled to reject from 66.5% to 70% of the samples submitted. We are as yet unconvinced of the reliability of physiological assay of ergot, in fact, feel that the paper of Edmunds and Hale is self-contradictory. If ergot possesses, as is now generally believed, two distinct and separate effects, due to different active principles, it is clear that no one test, assay or standard can fill the bill. Hence, until we can separate these active principles, and determine each separately, all physiological standards of ergot must be more or less unreliable. Our standardization has always been by the assay for cornutine by Keller's method.

Golden Seal. This drug always comes up well to the official requirements. Samples, however, with 4% and more of hydrastine are not as frequent on the domestic market as in European quarters, where numerous shipments with such a high alkaloidal percentage are quoted. Quite recently a sample had to be rejected which assayed only 2.18% of hydrastine.

Resin Guaiac. Many samples of this drug had to be rejected on account of their insufficient solubility in alcohol. Only in 1911, when 33% of the samples

were rejected, a better quality of the drug could be noticed, in former years the rejections amounted to 50 and even 60%.

Guarana. This drug was always above the U. S. P. standard.

Ginger. The percentage of oleoresin varies considerably, and a standard for this constituent should therefore be established.

Henbane. The conditions of 1910 don't seem to have been favorable for the growth of this drug. In this year, we rejected 63% compared with about 20% in the years previous. The standard adopted by the present U. S. P. is regarded as rather high by several drug dealers. Thus Caesar and Loretz (Halle, Germany,) write in their *Geschaefts-berichte* that it is difficult to supply a drug with such high alkaloidal contents, henbane generally assaying only from 0.05 to 0.07% of total alkaloids.

Ignatia Bean. No material variation in the amount of alkaloids could be noticed in this drug.

Ipecac. Caesar and Loretz (Geschafts-berichte, 1907) write that there was no reason for the U. S. P. to reduce the already low requirement of 2% alkaloids to 1.75%, since a drug with 2.5% was readily obtainable. Drugs of a better quality, therefore, seem to be shipped to Europe, as only a few lots with such a high alkaloidal percentage were offered to us, as may be seen from the attached table:

Year	Samples Examined	2.5% and Above	2-2.5%	1.75-2%	Below 1.75%
1906	12	1	9	2	0
1907	25	1 (2.75)	23	1	0
1908	13	0	10	2	1 (1.7)
1909	10	0	9	1	0
1910	8	0	7	1	0
1911	26	0	11	12	3

Jalap. The quality of jalap has improved, as may be seen from the table below. During the last three years lots with 16 to 20% of resin were not infrequent.

Year	Samples Examined	Below 5%	5-7%	7-8%	8-10%	10% and More
1906	14	1	6	5	2	0
1907	1	0	0	0	1	0
1908	5	0	1	2	1	1
1909	14	0	3	1	1	9
1910	37	2	11	4	2	18
1911	42	7	10	4	9	12

Jaborandi Leaves. The quality of this drug was a constant one. The alkaloidal percentage always was in the neighborhood of 1 per cent.

Kola Nut. This drug, which will be official in the next U. S. P., varies considerably in the percentage of caffeine. Taking 1.5% of caffeine as a fair standard, we were compelled to reject 30% of the samples submitted in 1907 and 1910, and 40% in 1911. The samples submitted in the years previous came up to the standard, but only a limited number of specimens had been examined during this time.

Mandrake. We had no difficulty in obtaining good mandrake root in the years 1906 to 1908. Only during the last three years has the quality of the samples

submitted been very poor. In 1910 only two samples assayed above 4.5% of podophyllin, and in 1911 only one. Samples with 3.5, 3 and 2.75% of resin were not infrequent.

Nux Vomica. About 30% of the samples submitted had to be rejected as assaying below the required amount of strychnine. During the current year all the samples came up fully to the official requirements.

Opium. The variation in strength of this drug was very slight only. We were always able to purchase opium with about 11% of crystallized morphine. In 1906 and 1911 samples were encountered which were below U. S. P. strength, assaying only 8.4% and 7.3% respectively. The latter lot consisted of hard, black balls with a polished surface, such as were reported quite recently by Carles (Journ. de pharm. et chim., 1911, page 343). On the other hand, samples with 14% morphine were not infrequent.

Scopola Root. The percentage of samples assaying below 0.5% of total mydriatic alkaloids amounted to: 1906 none, 1907 50%, 1908 64%, 1909 73%, 1910 40%. It is hardly conceivable that the percentage of proper strength drugs should have dropped so much on account of atmospheric conditions, etc. The poorer quality may be due to the presence of scopola japonica in the shipments of scopola atropoides, the former assaying as is well known about 0.3% of total mydriatic alkaloids. It seems a pity to drop this drug from the Pharmacopoeia, simply because the physician and the public do not know its name, and that hence there is no demand for it, and it cannot legitimately be substituted for belladonna. In our judgment, it should be given as an alternative in the Pharmacopoeia for belladonna, so that it can legally and legitimately be used for belladonna. Its effect and its constituents are practically identical with belladonna. As it is now, plaster manufacturers must use the higher priced belladonna at the public's expense, while the much cheaper scopola is relegated to the scrap heap.

Stramonium Seed. Very little variation was noticed in the alkaloidal percentage of this drug.

Stramonium Leaves. There was no reason for reducing the standard from 0.35% to 0.25%, since shipments with more than 0.35% are easily available. Only very few samples with less than 0.3% were met with. The quality of the drug was almost alike during the six years.

In concluding, we cannot refrain from an expression of high appreciation of the good effect the Pure Food law has had on the quality of crude drugs; spurious and almost worthless specimens being now very rarely met with on the market.

THE RELATIONS OF SUCCESS AND DUTY.

"The workman who drops his tools at the stroke of twelve, as suddenly as if he had been struck by lightning may be doing his duty—but he is doing nothing more. No man has made a great success of his life or a fit preparation for immortality by doing merely his duty. He must do that—and more. If he puts love into his work, the 'more' will be easy."—*William George Jordan.*

Papers Presented to Local Branches

"PATENT MEDICINES"—THE PHARMACIST'S DUTY IN REGARD TO THEM.*

BERNARD FANTUS, M. D., PROFESSOR OF MATERIA MEDIA AND THERAPEUTICS IN THE COLLEGE OF MEDICINE OF THE UNIVERSITY OF ILLINOIS.

Doctors and druggists exist for the good of the people. If the services of doctors are no longer needed, if "patent medicines" can cure the ills of mankind more efficiently or merely more economically than doctors can, then the medical profession is a useless parasite upon the body politic and ought to be abolished. And if "patent medicines" are all that is needed to cure the people's ills, then the pharmacist is not required either, for any $6-a-week clerk or any illiterate peddler can sell them just as well as a learned pharmacist, and pharmacy will have to go the way of the spinning wheel and of the stage coach. Let us face the question fairly and squarely: is the ready-made medicine the next step in the evolution of the treatment of the sick? This is an important and a practical question; for, if this is the case, then let us all get into the "patent medicine" business, before it is too late.

Unfortunately, the "patent medicine" is not the goal toward which modern medicine is tending. For, in the first place, our highest aim as physicians is the prevention of disease. Both public and profession are becoming more and more conscious of this, as is evidenced by the great public health movements that are afoot. In the second place, we have learned, and the people are commencing to realize it, too, that, with very few exceptions, medicines do not cure disease. If there were "specifics" in the homeopathic sense, if for each symptom or symptom group there existed an appropriate medicine, then a booklet containing symptoms arranged in alphabetical order and numbered medicines, like "Humphrey's Specifics" would become the ultimate result of all medical and pharmaceutical learning. But medicines do not act in that way.

Ever since the days of Hippocrates, the scientific physician has known that it is "nature" that does the healing. When a surgeon sets a fracture, all he does is to place the ends of the broken bone in the position they occupied before, and keep them there, while the mysterious forces of nature cause the bone to knit. When a physician administers iron to an anemic patient and the patient gets well, the doctor really cured the anemia no more than a hod carrier builds an edifice. The doctor merely supplied a material that was deficient in the economy. All the learning of the ages has not yet enabled us to make a single red blood corpuscle. The aim of all medical treatment is to aid "nature" in accomplishing the cure; for, while "nature" unaided will do much, "nature" aided by art can do much

*Address delivered at the December meeting of the Chicago Branch, A. Ph. A.

more. In most cases of illness, the physician's role is like that of an experienced guide, while the patient must do his own traveling.

I do not deny that often an appropriate medicine just "touches the spot" and gives relief; but relief is not cure; and the devising of "spot-touching" medicine is about as easy or as difficult as shooting a bird on the wing. Would a blind man have a better chance to hit the mark than a trained sharpshooter?

We have a few, unfortunately, very few, true specifics, that is medicines which in a special and unmistakable manner favor the cure of disease. One of these, for instance, is iron in certain forms of anemia. But giving iron in anemia is not the physician's highest function. The iron in "Williams' Pink Pills for Pale People" will do as much. The physician's business is to find the cause of the anemia; and, when the cause is removed, the anemia is soon at an end. In quinine we have an agency that has a special destructive influence upon the malaria organism. Yet, even here it requires skillful use of the medicine; or, else by excessive dosage, we may harm our patient, or by insufficient dosage develop in our patient a breed of malaria parasites that are immune to quinine, thus rendering our patient incurable by that drug. Similar are the relations of mercury to syphilis and of salicylate to acute articular rheumatism. It requires training and skill to assist most efficiently in the extermination of the invisible foes that infest the body. Diphtheria antitoxin converts this dreadful disease into a mild malady. But many a patient misses his chance for recovery by temporizing with patent medicines, such as "Tonsiline," which latter, though it might cure the sore throat in a giraffe, often fails to do so in the short neck of a child. Because any sore throat may be diphtheria, when a person comes to a druggist asking for something for a child's sore throat, the druggist ought to advise to have a doctor see the case. Newspapers instead of advertising "Tonsiline," or, at least, underneath each such ad., should caution their readers not to neglect a sore throat, especially not in a child, but to have it examined by a reliable physician.

From a therapeutic standpoint, "patent medicines" may be classified under the following headings: (1) Inert materials; (2) poisonous agents; (3) good enough medicines for the right case.

Inert materials owe their efficiency to the faith with which the patient takes them. One of the business tricks of the quack and of the nostrum maker is to get the victim to think that he has a disease that he does not have, and then to cure him of that idea by a placebo.

"Munyon's Kidney Cure," claimed to "cure Bright's disease, gravel, all urinary troubles, and pain in the back or groin from kidney disease," is said to be nothing more or less than pills weighing 0.6 grain and composed of 100% white sugar. No trace of any medication could be detected.

"Plantoxine," which is advertised as a "corrective for abnormal conditions of the system which create undue susceptibility to miasmatic diseases, plant pollen, lagrippe, etc., chronic malarial diseases, hay fever, hay asthma, rose cold, etc., influenza and lagrippe," has been alleged to consist entirely of milk sugar. Selling sugar of milk, worth wholesale about 10 cents per pound for about $6 retail apparently converts it into a most potent remedy, provided a sufficiently strong claim is made about its potency. (From "Nostrums and Quackery," published by the American Medical Association.)

Fraudulent as are such preparations, they are superior to the next class of "patent medicines" to which I wish to call your attention, namely those that contain poison. Most nostrum makers want to put a really good medicine upon the market, one that gives immediate relief. To produce such effect a potent drug is required. Now it is unfortunately true that all potent drugs are capable of acting as poisons. It is really only a narrow line that divides the medicine that helps from the poison that harms.

The tar barrel has yielded to medicine a series of most remarkable pain relieving agents in acetanilide, acetphenetidin, and antipyrine; and now these substances are used to an enormous extent for the relief of the aches and pains of mankind. Nearly every druggist has his own headache cure, nearly every one of the headache nostrums contains one of these drugs, and doctors prescribe them very extensively. Now why should we condemn their use without a physician's prescription? Let me cite to you their death and poisoning record, up to July 31, 1909, as published in the Journal of the American Medical Association of that date. Doubtlessly there are many more cases that have not been reported:

	Poisoning	Death	Habitual Use
Acetanilide	911	29	144
Antipyrine	593	15	7
Acetphenetidin	165	10	18

These agents are poisons to the blood and to the circulatory system, and certain people have a strong idiosyncrasy against them. When a doctor prescribes them, they are safer, because he can usually detect signs that would warn him of the presence of idiosyncrasy; and then, if he is a doctor worthy of the title, he will do everything in his power to determine the cause of the pain, so as to free the patient from the necessity of taking the drug. Pain is a danger signal. We must not remove the pain, without, at the same time, removing the danger.

Opium is king over all pains and distresses. The Easterners print upon their cakes of opium: "Mash Allah" (the gift of God). And so it is, one of the choicest gifts of God, if properly controlled. But when it escapes that control, it becomes a gift of the devil. Not only is there the danger of the opium habit, but the very power of the drug to give relief is one of its greatest dangers. Nothing is easier than to temporarily stop a cough with an opiate or to check a diarrhoea. But cough and diarrhoea are usually salutary natural reactions. They exist for the purpose of removing irritating material from the body. Lock up that material, and you aggravate the irritation of the diseased membrane. Druggists, if you must put up your own cough cure or diarrhoea drops, leave out the opiate from your formula! What should we say of the fiend, who beguiles the tired mother into narcotizing her babe with opiate "soothing syrups," thereby slowly but none the less surely undermining life at its very foundation? Would it be too much of a sacrifice to professionalism, for you pharmacists to refuse to carry in stock any "patent medicine" containing opiate?

As the law of Illinois now prohibits the sale of cocaine-containing nostrums, it is not necessary for me to say much about these here. Am wondering whether this law caused any appreciable diminution in the income of the drug trade. It surely must have caused a diminution in the number of cocaine fiends.

I am unable to tell from experience to what extent the liquor habit is induced,

aided or abetted by alcoholic nostrums from Hostetter's down to Peruna and Lydia Pinkham's. Perhaps not to any great extent in this town, where people have no difficulty in obtaining liquor in pure form. But I am assured that in temperance towns these things have quite a sale and that useful lives are wrecked by them that would not have succumbed to liquor because of prejudice against the latter, and the prevalence of the idea that "medicine" is good for a person; and if a little is good, more ought to be better.

A third class of nostrums may be recognized, good enough for the right case, but liable to do harm by getting to the wrong case. In the treatment of coughs, for instance, several stages must be recognized. There is the stage of dry cough that needs loosening up; later the secretion may become excessive and need drying up. And, what is still more important, many a case of consumption starts with a simple cough; and, by temporizing with various cough medicines, these patients lose valuable time, converting a curable case into an incurable one. In diarrhoea, there is a stage when evacuant treatment is indicated, and a later stage when astringency may be needed. Throughout, the proper dietetic treatment is of first importance. Constipation is caused rather than cured by cathartics. To the layman, a good cathartic means one that will produce profuse evacuation of the bowel. Such an action sweeps out of the alimentary tract in one day an amount of fecal matter that usually requires two days for removal. Thus there can be no bowel movement on the second day. And because he had no evacuation this day, the patient takes a cathartic; and this repeats itself indefinitely, the patient becoming a slave to the cathartic pill. The treatment of constipation needs change of habits and change of diet, in first place; and the mildest possible cathartic in progressively reduced dosage, in second place; and, if the dose of the cathartic cannot finally be discontinued, recourse to massage, gymnastics and electric treatment. A skin disease or an affection of mucous membrane may need soothing treatment or stimulation, mild or severe. There is no possibility of a single remedy suiting all cases of even the same kind of disease.

"Patent medicines" then are erroneous in principle and often disastrous in their results; though, of course, occasionally they are beneficial. They have the same advantage over the physician that the quack has: namely, that the physician is expected to cure; if he fails, everybody is told of it; when, on the other hand, "patent medicines" fail, no one hears of it, because the patient is ashamed of having been foolish enough to resort to them; if, however, he gets well, no matter whether because of or in spite of the "patent medicine," it is such a wonderful thing, that he tells everybody of it and cheerfully writes a testimonial. In their claims all "patent medicines" are fraudulent; for, if the nostrum makers confined themselves strictly to the truth in regard to the efficiency of their preparations, they could not get great results from their advertising.

I admit that the "patent medicine" fills a want, or else it would not exist. I can see how a poor person taken with what seems to be a minor ailment would seek relief in a 25-cent bottle of "patent medicine" rather than pay $1.00 for a doctor's consultation and 50 cents to the pharmacist for the medicine. And as long as conditions are such, the "patent medicine" will continue to exist; and druggists will have to sell them. However, it seems to me that pharmacists can do a good

deal to mitigate the evils arising from their use by adhering to the following principles, which I herewith respectfully submit to your consideration:

1. By resolutely refusing to carry in stock any nostrum containing poisons, especially habit producing poisons. The requirements of the "pure food and drugs act" make it easy to decide which nostrum would come under this heading.

2. By refusing to permit himself to become a nostrum manufacturer or to enter into partnership with one. For, knowing as he does, that it is impossible to be successful in this business without practicing fraud or foisting poisons upon the people, and doing them an untold amount of harm, the pharmacist as an honest partner of the physician in efforts to alleviate suffering and prevent disease, will not soil his hands with money obtained by dishonesty or at the expense of human suffering.

3. By not pushing the sale of "patent medicines" or advertising them in his store windows or upon his fixtures. For, recognizing the fact that "patent medicines" are at best makeshifts, often dangerous ones, it is derogatory to the dignity of the pharmacist as a scientific man to give them his endorsement, which advertising the article certainly means. Indeed, it is not a high compliment even to the business ability of the druggist to have him use his valuable window space to push the sale of articles upon which he makes a minimum profit, instead of using it for the promotion of the sale of goods that yield better returns.

4. By not joining the ranks of "price cutters." For, as I see it, price cutting on "patent medicines" merely means that, as there is very litle profit in them anyway, a dealer sacrifices all the profit in order to make more on other goods he hopes to sell to the same customer. What matters it, if the price cutter sells more "patent medicines" than you do, if the people come to appreciate you as a professional pharmacist? For professional services people always pay well and pay it gladly.

Ladies and gentlemen, the motto of this great association, of which I am proud to be a member, is not a mere dream: *"Pharmacia vera prevalebit,"* True pharmacy will prevail.

THE NECESSITY FOR A PHARMACOPŒIAL SUPPLEMENT.*

GEORGE H. MEEKER, PHAR. D., LL. D.

The ideal of all professions is to achieve for every member ethical and scientific excellence. Volumes might be written in defining these professional goals; but after all the spirit of the ethical is merely the "golden rule," while science is essentially the "knowledge of why"—the former satisfies the conscience; the latter, the reason. If within any profession some elected or self-constituted group of members should assert the right of a star-chamber censorship over the consciences and reasons of the members, such right would be promptly repudiated—royal prerogatives having no place in democratic science.

Yet it might be quite possible that unconsciously and by insensible degrees a

* Read before the Scientific Section of the Philadelphia Branch.

profession should drift into the foregoing deplorable relationship with one of its committees; and such is believed to be the actual state of relations between the pharmaceutic profession and the revision committee of the United States Pharmacopœia. Let at once be disclaimed any suggestion that the revision committee has either deliberately compassed undesirable conditions or that it would strive to perpetuate any recognized wrong. The point of view is merely that, while the work of the revision committee is on the whole most admirable and praiseworthy, yet a wrong does exist and should be recognized and remedied. This wrong is that the revision committee establishes the various standards of the Pharmacopœia, but does not deign to furnish the public and profession with anything more than fragmentary and casual reasons for these standards. While the committee confers with many manufacturers and scientific specialists, the profession as a whole neither participates in these conferences nor has ready access to the facts. Such a course is not only unwarrantable as noted above, but also dangerous and unjust.

It is high time for the revision committee to avail itself of the authority given it by the following resolutions of the National Convention of 1900:

"Resolved, That the Committee of Revision be authorized to prepare, and the Board of Trustees be authorized to publish, a supplement to the United States Pharmacopoeia, if in the opinion of the Committee of Revision it be deemed advisable."

Let the revision committee issue a supplement to the Pharmacopœia arranged so far as practicable similarly to the Pharmacopœia itself and setting forth seriatim its *reasons* for the official standards. There would be ample sale of the book to meet the expenses of publication; and one of the greatest wrongs of American pharmacy would be righted. Any objection that such a volume would be too large is invalid. It would require no great skill by intelligent arrangement of the contents of the Supplement, and by exclusion of unessentials, to produce a volume of approximately the same bulk as the Pharmacopœia. The first issue of the Supplement would doubtless have many faults to be gradually eliminated in subsequent issues. Upon the issue of the Supplement would begin a new era in pharmacy. No longer would the profession and the public be compelled to accept pharmacopœal standards blindly. Every one would work in the light; and the intelligent and active criticism made possible would rapidly improve the Pharmacopœia and eliminate the existing opportunities for special privileges.

How humiliating it is to a pharmacist, when, as a professional man, he is forced to admit that he is ignorant of the reasons for his own standards—since a certain committee sets his standards for him and fails to furnish him with a statement of the conditions which dictated these standards. Would not the American public, which recognized the United States Pharmacopœia in Sections 6 and 7 of the Federal Foods and Drugs Act of 1906, feel that it had been treated disingenously if it awoke to the fact that it had placed the drug standards of 95,000,000 citizens under the star-chamber control of a group of men who are independent of the American electorate and who do not even take the profession into their entire confidence? Does any one believe that with a full knowledge of these circumstances, the Supreme Court would sustain the Federal Foods and Drugs Act of 1906 in so far as concerns its recognition of the United State Pharmacopœia?

Failure to sustain would mean that there would be no legal standards; and pharmacists would be themselves to blame. The public has overdone its part in the effort to produce correct standards for the drug traffic. Let us hope that without edicts from the profession the Pharmacopœial Revision Committee will see and perform its duty in the premises.

As the matter stands today, the knowledge of the profession concerning the "purity rubric" is lamentably vague; and is practically confined to the dogmatic provisions of the main body of the Pharmacopœia—as inadequately elucidated by the preface and introduction to the work. The Pharmacopœial preface is admirable as far as it goes; but it should go much further. If the preface to the U. S. P. gave all the information that the public and profession have a right to know, then it would fill the place of the Supplement which is herein advocated. Thus, when its preface tells us that the Revision Committee has adopted the ruling of the Brussels International Pharmaceutic Congress to the effect that potent tinctures should refer to a preparation from ten per cent of active constituent, we have the sort of knowledge that it is our right to have with respect to all other provisions of the U. S. P. Unfortunately, however, we must usually content ourselves with the statement that the standards adopted are those which the Revision Committee consider best for us to have. Diligent search of the Pharmacopœia for real *reasons* for pharmacopœial standards will be found most disappointing.

We do, however, find a few facts that cast light upon the "purity rubric." Thus we are told that the United States Pharmacopœial Convention is incorporated for

"The particular objects and business of * * * establishing one uniform standard and guide for the use of those engaged in the practice of medicine and pharmacy in the United States whereby the identity-strength, and purity of all such medicines and drugs may be accurately determined."

The Pharmacopœial Convention instructing the Revision Committee with respect to the purity and strength of pharmacopœial articles, says:

"The Committee is instructed to revise as carefully as possible the limits of purity and strength of the pharmacopoeial chemicals and preparations for which limiting tests are given. While no concession should be made toward a diminution of medicinal value, allowance should be made for unavoidable, innocuous impurities or variations due to the particular source or mode of preparation, or to the keeping qualities of the several articles. In the case of natural products the limits of admissible impurities should be placed high enough to exclude any that would not be accepted by other countries.

"Regarding the strength of diluted acids, tinctures and galenical preparations in general, it is recommended that the Committee keep in view the desirability of at least a gradual approach upon mutual concessions toward uniformity with similar preparations of other pharmacopoeias, particularly in the case of potent remedies which are in general use among civilized nations."

The Revision Committee itself informs us that

"The purity standard, or purity 'rubric' * * * is placed * * * immediately before the description, and * * * defines the percentage of small quantities of permissible, innocuous impurities which do not materially affect medicinal action or interfere with pharmaceutical uses. * * * the standard * * * represents what the Committee believes to be obtainable, and which, on the other hand, will not prove burden-

some or impossible for the manufacturer to produce without adding unnecessary and excessive cost to the consumer."

With the foregoing meagre generalities the profession is left to draw its own conclusions—some of which will doubtless be correct; but all of which must be uncertain. But the scientific mind is not and never can be content with mere conclusions. Its demands are ever for a knowledge of the premises upon which the conclusions were based—so that it can check the conclusions and accept them upon their merits or revise them if they be found faulty.

A REVIEW OF THE CHEMISTRY OF DIGITALIS.*

C. H. KIMBERLY, M. SC., PH. D., MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA.

Digitalis plays such an important part in our present day medicine that its chemistry should be well worked out. If one should read but one report, it would so appear, but the deeper one probes into the results of chemical investigation, the more confused he becomes and finally finds himself unable to decide positively of what it really does consist.

Tracing the steps of its investigation, we find in 1820 it was examined by Pancquay, in 1824 by Lancelot and in 1834 by Leroyer; also about this time it was studied by Homolle and Quevenne. Both Leroyer and Lancelot described a crystalline principle, while Homolle and Quevenne claimed its active principle to be amorphous. In 1868, Nativelle isolated a crystalline principle, but he later thought this to be a compound body. In 1871 Schmeideberg[a] and Killiani independently took up the work and each isolated a crystalline principle which they called *digitoxin* and it appeared that this was the same principle described by Nativelle. For some time this substance commonly known as *digitalin* was the only principle known and a number of substances classed as both scientific and commercial were exploited under that name.

It soon became evident that these products were mixtures, also that digitalin was not the only active constituent, and further effort by Schmeideberg produced the isolation of four glucosids, namely *digitonin, digitoxin, digitalin* and *digitalein,* and he proved also that the digitalin of commerce consisted of various mixtures of these glucosids. He found it difficult to obtain these glucosids in a pure state on account of their easy decomposition. In the years between 1892 and 1899 Killiani confirmed this contention of Schmeideberg, and increased our knowledge of digitalis by information relative to the decomposition products. Work along similar lines during the same and following years has been done by Keller, Cloetta, Boehm, Bargar and Shaw, Brissemoret and Joanne and others though the principal authorities still are Schmeideberg, Killiani and Cloetta. At the present time on account of the complexity of digitalis and the ease with which its constituents decompose it is difficult to isolate them in a pure state, and we are compelled to say "we believe" rather than "we know."

According to Schmeideberg and Killiani, we have the following constituents:

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* Read before the Scientific Section of the Philadelphia Branch.

digitoxin, digitalin, digitalcin, digitophyllin, digitonin, digitin, digitoflavin fixed oil, volatile oil, starch, gum, sugar, inosit, pectin, red and yellow coloring matter, digitalosmin (stearopten), *antirhinic acid, digitalic acid,* and in fresh leaves an *oxydase,*[b] a *ferment,* as well as decomposition products, such as *digitoxase,* etc.

Digitoxin $C_{34}H_{54}O_{11}$ (Killiani) is present in the largest quantity, the yield from the leaves varying from 0.22 to 0.4%, the average according to Ceasar and Loretz in the analysis of forty-seven samples being 0.25% and according to Kain 0.30%. The yield from the seeds is much less and Killiani questions if it is present at all. Schmeideberg is doubtful as to the character of this product, but Killiani claims that it is a glucosid. It is insoluble in water, but somewhat soluble in the presence of other glucosids particularly digitonin. It is readily soluble in alcohol and chloroform, but is insoluble in ether, and Keller and Panchaud claim it is precipitated from a chloroform solution by means of ether. It readily splits up into *digitoxigenin,* which is soluble in water, *digitoxan,* a sugary body, and glucosid called by Schmeideberg, *toxiresin.* This hydrolysis takes place best in alcoholic hydrochloric acid solution. Digitoxin (crystal) is claimed by Petit and Polonowski to be identical with the French commercial product, *digitaline* of Nativelle. Digitoxin (crystal Merck) is claimed also to be the same qualitatively as *digitaline.* Digitoxin amorphous soluble, is claimed by Cloetta as an isomer of digitoxin crystal, but it is found in small amounts only in the leaves and is thought to be *digalin* or a mixture, but certain claims of Killiani as to its being a mixture, largely digitalein has not been proven by experimentation.

It appears that digitoxin is the most abundant and important constituent and is found in both the leaves and the seeds, but only in small quantity in the seeds.

The commercial articles are generally not of great reliability on account of their being mixtures and hence not capable of standardization.

Digitonin was first obtained in a crystalline condition by Killiani, by extracting the commercial German digitalin, of which it is the largest ingredient, with a mixture of absolute alcohol and chloroform and then precipitating by the addition of ether. It has a formula $C_{54}H_{92}O_{28}$ (Killiani). It is classed as a saponin, holds digitoxin in solution and breaks down into digitogenin, dextrose and galactose (Cloetta). Killiani claims that the decomposition products are sapogenin (similar to digitogenin) and a mixture of glucose and galactose. Digitonin crystalline (Killiani) and digitonin amorphous (Schmeideberg) are entirely different substances, but Cloetta[d] after extensive study thinks this difference is largely due to the impurity of the product of Killiani.

Cloetta, Kellar and Killiani all found digitonin in both leaves and seeds. Killiani claims that the seeds contain a considerable amount, but the leaves very little. Digitonin is said to be a saponin, and as such it assists in holding other constituents in solution.

Digitalin $C_5H_8O_2$ [d-e] as isolated by Homolle was later found to be a mixture of digitalin, digitoxin and digitogenin and is non-crystalline. The so-called digitalin is a mixture of digitalein and digitonin, digitalin and digitoxin. It is a commercial preparation usually amorphous in character and is soluble in

water and alcohol. Digitalin Nativelle is a crystalline product and consists largely of *paradigitogenin.*

Digitalinum Verum is the main constituent of the seed, and if present in the leaves is in very small amounts. It has a formula $C_{35}H_{56}O_{14}$ (Killiani) and is thought to be present in 3 to 4% in the plant. It decomposes so readily into digitalogenin and digitalose that its percentage is hard to determine. It is usually amorphous in character. It is insoluble in chloroform and water but soluble in alcohol. Schmeideberg says it is identical with the digitalin glucosid and is essentially the same as the others mentioned as commercial products.

Digitalein (Schmeideberg) is a mixture of digitoxin, digitonin and digitalein and is present in considerable quantity in commercial digitalins. It is distinguished from digitalinum verum by its solubility, since it is soluble in water and alcohol. It is described as a yellow amorphous mass although it is also claimed that there are two kinds, namely, the amorphous and the crystalline. It has properties similar to a saponin, assists in the solutuion of other principles and in a water solution it foams and rapidly becomes sour. It is, however, not well characterized.

The other principles of digitalis are of less importance, and to some extent also less understood. The opinions are held, however, that digitophyllin has a formula of $C_{32}H_{52}O_{10}$, is a modified digitoxin and is found only in the leaves.

Digitin is considered by many to be the same as digitonin.

Digitoflavin[b] $C_5H_{10}O_6+H_2O$ is not well known, but is thought to play a part in the coloring of the plant.

The commercial products are quite well known and need no special consideration here. It need only be said that while many claims are made for each, that they are not well characterized substances, cannot be well standardized and hence should be handled with much caution.

The methods of assay are mainly based on the content of digitoxin, but since the other principles so largely modify the action of digitalis, this would seem to be unreliable.

The method most used is that of Keller[f] which is based entirely on this principle and is dependent upon the solubility of this principle in 70% alcohol. The sample is extracted with alcohol, the alcohol is evaporated, the residue is diluted with water, this solution is precipitated with lead subacetate, the excess of lead is removed by sodium sulphate and the filtrate is made alkaline with ammonia. This is extracted with chloroform, purified with petrolic ether and later with alcohol and ether.

Fromme[g] modifies this method slightly in the original extraction and Staeder[g] proposes a different method which is found in *Phar. Zeit,* 1901, vol. 45. Chemical assays, however, seem to yield poor results, and when checked by physiologic tests the two methods do not give comparative results. Zeigenbein,[h] Bührer,[e] Bargar and Shaw,[i] Reed and Vanderkleed,[j] and others have performed these tests, and while the latter obtained results more nearly alike, yet they all seem to prove the inefficiency of our present assay methods in determining accurately by chemical assay the active constituents. Moreover, Bargar and Shaw[i] made up solutions with known amounts of digitoxin and state that they could isolate only 25% of that known to be present. Other authors have obtained

better results but apparently far short of the true amount. It would seem therefore that a large amount of chemical investigation is a necessity before digitalis can be properly standardized by chemical analysis alone, and a vast field of chemical research lies before us.

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THE MANUFACTURE OF COAL TAR AND COAL TAR PRODUCTS.*

GEORGE MCDERMAND.

About ten years ago the Denver Gas and Electric Light Company saw the possibilities of manufacturing and selling coal tar products in Colorado and the Western States. A plant was erected and roofing and paving materials manufactured. In a few years the sales were so great, with the demand for the products steadily increasing, it became imperative that a larger plant be constructed. The result was that a modern up-to-date tar plant with a large capacity and equipped to go more thoroughly into the manufacture of these compounds was erected. The amount of tar worked up into salable material by this plant is 100,000 gallons per month.

Coal tar is obtained during the process of gas manufacture. It is collected from the hydraulic mains and gas condensers, and after passing through a separator to relieve it of ammonia liquor, is stored in large wells until used in the manufacture of tar products.

Coal tar mixed with tar oils is extensively used as a paint for iron work and is used on the bottom of ships to keep them free from barnacles. It is also used for painting roofs, wooden buildings, fence posts, etc. Tar paint is an excellent wood preservative, as it contains a large amount of creosote. Paints that are composed of coal tar are very durable owing to the fact that tar is non-corrosive and free from oxidation.

Coal tar without water content is used in manufacturing tarred felt. Modern saturating machines convert the dry felt into uniform rolls of tarred felt. The roll of dry felt is placed on a spindle at the end of the saturating machine; it is run down into a saturating tank about five feet and is kept in the tar by an idler; after coming from the tar it is run between two rolls, where the surplus tar is pressed out, from which it is wound on a spindle until the roll becomes approximately fifty pounds. It is then taken off and seasoned in a warehouse, which takes about a week, before being wrapped and labeled.

* Read before the Denver Branch.

Four grades of tarred felt are manufactured at this plant. The heavy grade, No. 1, weighs twenty pounds to the square; the next heaviest is No. 2, weighing seventeen pounds; the medium grade, No. 25, weighs fifteen pounds; and the lightest, No. 22, thirteen pounds to the square.

The distillation of coal tar is carried on in stills with a capacity of about 5,000 gallons each. During the distillation the following fractions are made:

The oil collected up to 110° C is first light oil.
The oil collected from 110° C to 210° C is second light oil.
The oil collected from 210° C to 240° C is carbolic oil.
The oil collected from 240° C to 270° C is creosote.
The oil collected from 270° C to 360° C is anthracene oil.

In our plant the highest temperature reached is 270° C., as this produces a pitch which is the most universally used in this territory for roofing and paving purposes. On especial occasions, we make a harder grade of pitch for sealing dry cell batteries. The distillation as carried on here is as follows: The first and second light oils are run in one fraction. The carbolic and creosote oils in another. Only two fractions are made. The oils are then redistilled, which will be explained later.

The pitch is graded by suspending a cubic half-inch of pitch on a wire in a beaker of water one inch from the bottom, and thermometer is suspended with the bulb on a level with the center of the cube. The temperature is brought up five degrees per minute with a Bunsen burner. When the cube melts and just touches the bottom of the beaker, the temperature registered on the thermometer is the melting point of the pitch.

The grades of pitch made by this company are bituminous cement, road binder, waterproofing cement work, winter and summer roofing, expansion joints, block paving, and cement for dry cells. Three grades of dust laying tar are also made.

The gravel roof, which is laid of coal tar pitch and tarred felt, has become the most universally used roof on substantial buildings throughout the whole country; it is practically without competition. The United States Government specifies the gravel roof on all Federal buildings. The gravel roof has proven so successful, after many years' use, owing to its being waterproof, fireproof, elastic, and its long life, being suitable to all climates. The demand for material for gravel roofs has become so great that tar plants dispose of great quantities of their coal tar in manufacturing this material. In building a gravel roof, contractors first lay a ply of dry felt or building paper, which is followed by from four to six plies of tar paper, each ply being mopped sufficiently with coal tar pitch so that in no place does tar paper touch tar paper. When these plies of paper are laid, the surface is mopped over with pitch, and for protection, gravel is evenly spread on top of the hot pitch. These gravel roofs last approximately twenty-five years without repair.

The light oils obtained during the distillation of coal tar contain carbon bisulphide, benzol, toluol, xylol, coal tar naptha, and burning oil. It is used in paints as a general solvent.

The creosote oil contains carbolic acid, napthalene, ortho, meta and para cresol. This oil is used as a wood preservative, disinfectant, spray, sheep and cattle dip;

it is also used in shingle stains, iron and wood preserving paints. Large drug and paint houses in San Francisco, Seattle, and Portland use it in carload lots.

Napthalene is found in all the fractions, to a certain extent.

Benzol is used as a varnish remover, in paints, and for dissolving resins. It is the source of a great many products. Many colors are produced from benzol.

Nitro-Benzol, known as oil of bitter almonds, and under the name of oil of mirbane, is used to perfume soap. It is prepared by adding a mixture of nitric and sulphuric acids very slowly, to benzol, keeping the temperature low; after the acid is all added, it is washed several times with water; then purified by distillation. It has the formula of $C_6H_5NO_2$.

Aniline—$C_6H_5(NH_2)$, is prepared from nitrobenzene by a mixture of iron filings and hydrochloric acid, when the chlorides of iron and aniline is formed. The aniline is liberated by an alkali and is separated by distillation.

Aniline is a colorless liquid possessing a peculiar odor. When an aqueous solution of an alkaline hypochlorite is added, a violet coloration is produced.

When nitrous acid is allowed to react on aniline nitrate, diazobenzene nitrate is formed. This compound is a colorless crystalline substance which explodes on percussion or when heated. These salts when boiled with water decompose. Nitrogen is liberated and the group HO replacing N_2 forms phenol.

Aniline yellow is produced by the action of nitrogen trioxide in an excess of aniline, and heated in the presence of a salt of aniline. A great many more colors may be produced.

Benzylamine is obtained by the action of ammonia on benzylchloride. It is a true amine and gives rise to corresponding secondary and tertiary amines.

Benzyl alcohol $C_6H_5CH_2(OH)$ is obtained by the action of alcoholic potash on nitro benzol. Oxidizing agents convert it into the aldehyde C_7H_6O, and lastly, into benzoic acid.

Quinol, or hydroquinone, is prepared by dry distillation of quinic acid and by the moderate oxidation of aniline.

Acetanilide is formed when aniline is boiled with acetic acid or its anhydride.

Phenol: The creosote here contains about 23 per cent carbolic acid and 35 per cent of the three cresols. This creosote is used to a large extent as a disinfectant and sheep and cattle dip, the creosote being suspended in a rosin soap.

Our commercial cresol contains about 34 per cent carbolic acid and 66 per cent of the three cresols. It is known to tar distillers as carbolic oil No. 1 and No. 2, according to the number of times it has been distilled. Disinfectant manufactures know it under the name of cresylic acid.

The creosote is distilled in an especially constructed still, the fraction between 170° C. and 210° C. is collected and redistilled.

Cresylic acid rapidly becomes discolored in the light. It is used as an insecticide and germicide and suspended in a neutral linseed oil soap as a sheep dip, having twice the strength of the creosote dips.

Carbolic acid is produced by agitating the carbolic oil with a 10 per cent solution of caustic soda, neutralizing the sodium in the sodium phenate with a 10 per cent solution of sulphuric acid. The phenol is then separated from the water and distilled, the portion distilling within a few degrees of 182° C. is subjected to a

freezing mixture when crystals of phenol form. This process in some cases is repeated several times.

Salicylic acid is produced by dissolving phenol in caustic soda, then passing carbon dioxide into the dry salt which is slowly heated up to 180° C. Salicylic acid on being heated breaks up into phenol and CO_2.

Phenolphthalein is formed by heating phenol with phthalic anhydride and sulphuric acid.

Phthalic acid is produced by the oxidiation of napthalene and crystallizes from hot water in large prisms. It is decomposed on distillation into phthalic anhydride and water.

Picric acid is formed when phenol is acted upon by nitric acid.

Napthalene moth balls are produced by distilling crude napthalene with 5 per cent sulphuric acid; the purified napthalene is then formed into balls.

Alpha and Beta napthol are used in preparation of colors; thus, the sodium compound of a dinitronaphthol is known as napthalene yellow.

By the action of concentrated sulphuric acid, napthalene yields two isomeric sulphonic acids of the formula $C_{10}H_7SO_3H$.

Between the temperature of 80° C. and 100° C., the alpha modification is produced, while at 160° C. to 170° C., beta napthalene-mono-sulphonic acid predominates. On diluting the solution with water and saturating it with lead carbonate and filtering from the insoluble lead sulphate and excess of lead carbonate, the lead salts of the two sulphonic acids are obtained in solution. They are then concentrated and crystallized, forming napthalene-sulphonate; when this is fused with caustic potash, a substitution of OH for SO_3 occurs, forming the variety of naphthol corresponding to the sulphonate employed. When this fused mass is dissolved in water and filtered, the solution is treated with hydrochloric acid, when the naphthol is precipitated. There are other ways of obtaining napthol.

Beta napthol refluxed with wood alcohol produces a perfume with the scent of cassia blossoms, and when refluxed with grain alcohol, produces the scent of orange blossoms.

LEGALIZED ADULTERATION OF FOODS AND DRUGS.*

CHARLES M. FORD.

It would be too much to expect that the Federal and state laws for regulating the manufacture and sale of foods and drugs could, in the short period of their existence, have accomplished all that was hoped for, by the champions of so fundamental and far-reaching a reform.

It was not possible, and is not now, to provide in the letter of the law for the detection and punishment of every form of adulteration and misbranding; although in the past five years we have learned how, in several important ways, to amend the Federal Act.

Even when amended in accordance with all the views of wise, vigilant and honest exponents of pure drugs and healthful foods, it would be still general in

* Read before the Denver Branch.

its character, leaving much to interpretation, regulation and administration by those intrusted with its enforcement.

It is not within the range of human possibilities to make the law so broadly specific as to reach every cunning evader or violator. Sufficient latitude and discretion must be allowed the officials charged with its enforcement to cope with those individuals in the community, who would for profit engage in the traffic of adulterated foods and drugs.

In the exercise of this discretion, granted by law to Federal and state officials lies the crux of the pure food and drug situation; and is found in the set of regulations adopted by the United States Department of Agriculture, and the Food and Drug Departments of the various states. These officials are in duty bound to yield as much to the demand of big and little business as the lives and health of the nation will permit; to be generous to one without being unjust to the other.

Courts and other officials are naturally lenient in the enforcement of a law providing punishment for acts hitherto not within the purview of law.

This leniency is observed in the nominal fines imposed by Federal courts for the many flagrant and vicious violations of the Food and Drugs Act, since its enactment. It is a comforting sign, however, to see our high courts so considerate and charitable.

But the leniency shown by the Executive Department of the Government is giving cause for alarm. Congress in its tender regard for the country's business interests, decreed that the Act of June 30, 1906, should not be operative until January 1, 1907. A six months' respite was thus granted the traffickers in adulterated and misbranded foods and drugs.

The Colorado Act of March 7, 1907, was not effective until January, 1908, giving immunity until the latter date, from both Federal and state laws, to those conducting their unlawful operations within the state.

These liberal periods of immunity prove not to have been sufficient for disposing of the quantities on hand of adulterated foods and drugs; in fact, it is well known that the production of such goods was continued and the kind heartedness or cupidity of officers of the law relied upon for procuring further time. That the faith of the business interests was not misplaced is shown in concessions granted for the continued use of foods containing copper and tin salts, sulphur dioxide, sodium benzoate, saccharin, talcum and aniline dyes.

The absurdity of the position of the Department of Agriculture in permitting the use of poisoned foods is seen in fixing the percentage of tin or copper salts, which is legal, and in not fixing the quantity of food which the individual may consume.

The inadequacy of the Federal Act is apparent when by the exercise of discretionary powers such traffic is possible.

Nobody will contend that sulphur dioxide is a safe ingredient of foods in daily use; yet the Government says you may take 155 milligrams with each kilogram of food; but is silent as to the quantity one may consume without suffering disastrous consequences.

The use of saccharin is probably the most vicious form of legalized adulteration, because unlike the other adulterants above named, it is substituted for one

of the chief constituents of food and possesses no nourishing or other useful property. It is employed solely to cheapen the product and deceive and starve the consumer.

This writer erroneously stated in a former issue of the bulletin of the Colorado State Board of Health that "artificial benzoic acid, one of the legalized adulterants of food is made almost exclusively from the urine of horses and other herbivorous animals, and always carries the aroma peculiar to its source.". It should read "formerly so made, but now superseded by a benzoic acid obtained by the chlorination of toluene, which though not so pure chemically, as that obtained from urine, is preferred because furnished at about half the price."

All text books treating on this subject and published during the past thirty years give this information, except as to the reason for preference being given to the coal tar synthetic. If there be any person so unsophisticated as to imagine the manufacture of a few tons of benzoic acid from urine to be a chemical curiosity, let him go to the corner drug store and ask to be shown:

National Dispensatory, 1884, 3rd edition, page 35.

National Standard Dispensatory, 1905, 1st edition, page 33.

Remington's Pharmacy, 1887, 3rd edition, page 915.

Druggists' Circular, 1909, Feb. and March, pages 56, 127 and 138.

The value of benzoic acid as an antiseptic obtained convincive proof last June when the writer in conjunction with Dr. Sherman Williams, president of the State Board of Health, while visiting a pickle factory of this city, discovered several barrels of tomato pulp, which it was said had just been received from a cannery in northern Colorado. The heads of the barrels were swelled, the staves sprung, and the working pulp oozed through many forced crevices.

The pulp certainly looked like a total loss, but the addition of benzoate of soda, after boiling in copper kettles, made this decomposing pulp available for ketchup. It is possible that cresol, or some other well-known antiseptic would have been just as effective, but doubtful.

The most prolific source of adulteration in drugs is through the "relabeling" process in vogue in the U. S. custom houses.

When a drug arrives there, no matter how inferior or deteriorated in quality, it is examined by Government experts and its true character revealed. Whereupon it may be released to the consignee subject to a relabeling upon the cask, bale or other container, on which shall be declared the degree of adulteration.

If the contents of such bale or cask pass through a drug mill or are used in compounding or manufacturing, it is obvious what a farce this relabeling is.

In this way do we account for the poor quality of powdered drugs and spices on the market. Also for the resin of guaiac, which appears to be common rosin coated with powdered guaiac resin; a "tearless" benzoin mixed with barks, gravel and other extraneous matter and asafetida possessing none of the attributes of the true gum resin, except a slight peculiar odor.

A feature of the Colorado Food and Drug Law provides that the regulations adopted by the State Board of Health shall not conflict with nor be more stringent than those adopted by the U. S. Department of Agriculture; hence our anxiety and enforced interest in the Federal regulations.

Section on Scientific Papers

Papers Presented at the Fifty-Ninth Convention

THE SCOPE OF FOREIGN PHARMACOPŒIAS.

M. I. WILBERT.

In connection with the work of compiling the Digest of Comments on the Pharmacopœia of the United States (eighth decennial revision) and the National Formulary (third edition) now being carried on in the Hygienic Laboratory it has been found desirable to have for ready reference an index of the corresponding monographs in foreign pharmacopœias.

The index is arranged on cards or heavy paper slips, 12.5 by 20 cm. in size, and since its completion has been suggestive of a number of practical applications in connection with the study of articles official in the Pharmacopœia of the United States.

Not the least interesting of the several uses to which the index can be put is a comparative review of the scope of the U. S. P. with that of the pharmacopœias of other countries.

Thus it may interest you to learn that of the 957 titles included in the U. S. P. the equivalent of 356 are included in ten or more of the recently published foreign pharmacopœias, 144 of the articles being included in all of the fifteen pharmacopœias under review.

A total of 201 U. S. P. titles have no corresponding description in any one of the foreign pharmacopœias and an additional 94 of our official substances have been included in but one of the several books while the remaining 306 titles occur in from two to nine of the foreign pharmacopœias.

A further review of these titles suggests that fully 90 per cent of our widely used and medicinally valuable remedies are included in the 356 titles recognized by the majority of the foreign pharmacopœias while but a very few of the articles not described in some one other pharmacopœia would be seriously missed by American physicians if their official recognition were discontinued.

The appended tables present a review of the general scope of the recently published pharmacopœias and it is interesting to note that the number of articles not included in the U. S. P. is almost proportional to the total number of titles included in the foreign pharmacopœias rather than depending to any appreciable degree on the direct intercommunication existing between the two countries.

Thus the Servian Pharmacopœia with only 474 official articles contains but 144 that are not described in the U. S. P. and the Ph. Dan. VII with 489 official articles contains 160 that are not recognized in this country.

The new French Codex, on the other hand, with 1122 official articles contains 686 that are not included in the Pharmacopœia of the United States, and the new

German Pharmacopœia with approximately 700 titles (671) contains 269 for which no corresponding title is to be found in the U. S. P.

For some decades the German Pharmacopœia has held the rather unique distinction that it contained fewer articles not included in other pharmacopœias than any one other book of its kind. The Ph. Germ. IV contained but eleven titles that were not included in one or more foreign pharmacopœias and the Ph. Germ. V, despite the inclusion of a number of comparatively recent German chemicals, contains only sixteen titles not included in some one other pharmacopœia.

One of the more promising indications that pharmacy is destined to play an important part in the future development of the medical sciences is to be found in the general recognition that has been accorded to the provisions of the international treaty of 1906 regarding the strength of potent medicaments, based on the Brussells Conference of 1902.

The accompanying table (II) based on the comparative data that have appeared in the several volumes of Digest of Comments mentioned above, contains a graphic presentation of the approximate degree to which the several recently published pharmacopœias have complied with the provisions of the Brussells Protocol.

While the rating that has been given the several articles is necessarily an arbitrary one it nevertheless serves to indicate approximately the degree to which the several pharmacopœias have complied with the requirements of the Brussells Protocol, on a basis of 5 points for each title.

Taking the practical results of this, the first international treaty for the unification of medicaments, as a basis it would appear that even more can be accomplished in the very near future and that the frequently expressed hope that we may have international uniformity in Latin titles, methods of analysis, and strength of all potent medicaments may become a reality in the not far distant future.

In conclusion may I express the hope that American pharmacy will take an active part in the development of acceptable standards for widely used medicaments and that in future American pharmacists will lead rather than follow in any movement designed to advance the sciences relating to medicine as well as medicines.

TABLE I, SHOWING NUMBER OF TITLES INCLUDED IN THE SEVERAL NEWER NATIONAL PHARMACOPŒIAS.

	Published	Total No. of Titles	General Headings	Drugs	Chemicals	Preparations
Ph. Germ., V	1910	671	34	191	202	244
Ph. Russ., VI	1910	617	26	179	193	219
Ph. Hung., III	1909	534	17	152	171	194
Ph. Ital., III	1909	659	18	175	195	271
Ph. Fr., V	1908	1122	48	271	293	510
Ph. Svec., IX	1908	583	19	144	179	241
Ph. Serb., II	1908	474	18	141	141	174
Ph. Helv., IV	1907	853	29	244	227	353
Ph. Dan., VII	1907	489	22	142	144	181
Ph. Austr., VIII	1906	698	19	232	160	287
Ph. Belg., III	1906	722	25	185	173	329
Ph. Japon., III	1906	706	14	204	207	281
Ph. Ndl., IV	1905	673	17	200	182	274
Ph. Hisp., VII	1905	1073	0	269	260	544
U. S. P., VIII	1905	957	6	241	268	442

TABLE II, SHOWING THE APPROXIMATE DEGREE OF COMPLIANCE WITH THE PROVISIONS OF THE BRUSSELS CONFERENCE AS EVIDENCED IN THE PHARMACOPŒIAS PUBLISHED FROM 1905 TO 1910 INCLUSIVE.

INTERNATIONAL PROTOCOL TITLES	U. S. P. VIII, '05	Ph. Hisp. VII, '05	Ph. Ndl. IV, '05	Ph. Austr. VIII, '06	Ph. Belg. III, '06	Ph. Japon IV, '06	Ph. Helv. IV, '07	Ph. Dan. VII, '07	Ph. Fr. V,'08	Ph. Svec. IX, '08	Ph. Serb. II, '08	Ph. Ital. III, '09	Ph. Hung. III, '09	Ph. Russ. VI, '10	Ph. Germ. V, '10
Aconiti tuber	4	3	5	..	4	5	5	..	5	..	..	5	..	5	5
Tinctura Aconiti	3	5	5	..	5	4	5	..	5	..	..	5	..	5	4
Belladonnae folium	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Tinctura Belladonnae	3	5	5	5	5	..	5	..	5	..	5	5	5	5	..
Extractum Belladonae	3	..	..	5	5	..	5	5	5	5	5	5	5	5	5
Colchici semen	5	5	5	5	5	5	5	5	5	5	5	5	5	..	5
Tinctura Colchici	3	5	5	5	5	5	5	5	5	5	5	5	5	..	5
Digitalis folium	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Tinctura Digitalis	3	5	5	5	5	5	5	5	5	5	5	5	2	5	5
Ipecacuanhae radix	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Tinctura Ipecacuanhae	..	5	5	5	5	5	5	..	5	5	5	5	5	..	5
Sirupus Ipecacuanhae	2	5	5	5	5	5	5	..	2	..	5	5	5	5	5
Hyoscyami folium	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Tinctura Hyoscyami	3	5	5	..	5	..	..	..	5	..	..	..	..	..	..
Extractum Hyoscyami	3	5	5	5	5	2	5	5	5	5	5	5	5	5	5
Nux vomica	4	5	5	5	5	4	5	5	4	5	5	5	5	5	5
Tinctura Nucis vomicae	3	5	5	5	5	5	5	5	4	4	5	5	5	5	5
Extractum Nucis vomicae	3	5	5	5	5	..	5	5	5	5	5	5	5	5	5
Pulvis Opii	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Extractum Opii	5	5	5	5	..	3	5	..	5	5	5	5	5	5	5
Tinctura Opii	3	5	5	5	4	4	5	5	4	4	5	5	5	4	4
Tinctura Opii crocata	..	5	5	5	4	..	5	5	..	5	5	..	5	5	5
Opii et Ipecacuanhae pulvis compositus	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Tinctura Opii benzoica	4	5	5	..	5	5	5	5	5	5	..	..	..	5	5
Tinctura Strophanthi	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Ergotum secale	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Extractum Ergoti	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Extractum fluidum Ergoti	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Acidum hydrocyanicum dilutum	5	5	5	..	5	..	..	..	5	..	..	5	..	..	..
Aqua Laurocerasi	..	5	4	5	5	3	5	..	5	..	..	..	..	..	..
Aqua Amygdalae amarae	2	..	..	..	2	5	..	5	..	5	5	5	5	5	5
Aqua phenolata	..	5	5	5	5	5	5	..	5	5	5	5	5	..	5
Sodii arsenas	4	5	5	..	5	..	5	..	5	..	..	3	..	..	..
Kalii arsenicosi liquor	5	5	5	5	5	5	5	5	5	5	..	5	5	5	5
Sirupus ferri iodati	5	5	5	5	5	5	5	5	2	5	5	5	5	5	5
Tinctura Cantharidis	3	4	5	5	5	5	4	..	5	5	5	5	5	5	5
Tinctura Iodi	3	..	5	5	5	5	3	5	5	..	5	5	5	5	4
Tinctura Lobeliae	3	5	5	..	5	5	5	5	5	..	5	5	3	..	5
Cocainum hydrochloricum	5	5	5	5	5	5	5	5	5	..	5	5	5	5	5
Unguentum Hydrargyri	3	5	5	5	5	3	5	5	3	5	5	5	5	5	5
Vinum antimoniale	5	5	5	5	5	5	5	..	..	5	..	5	5	5	5

A FEW SUGGESTIONS FOR THE NINTH DECENNIAL REVISION OF THE UNITED STATES PHARMACOPŒIA.

L. HENRY BERNEGAU AND GEORGE E. E'WE.

While we have no doubt but that many of the difficulties met by us in following official instructions for the testing of U. S. P. products have already been or will be corrected by the Committee of Revision, we have summarized a number of them, on which we have not hitherto seen comments, and beg to offer them, together with certain suggestions, in the following paper.

Aqua Ammoniae, Assay of.—The official method of weighing and titrating is inconvenient and subjects the sample to possible loss by volatilization. An improvement consists in placing a measured volume of standard acid solution in a glass stoppered weighing bottle, weighing, quickly introducing a sample of the ammonia to be assayed, stoppering tightly, and weighing again. A very little practice enables one always to use a proper excess of acid.

In the assay of *volatile acids,* the same principle may be employed, weighing the sample in a weighing bottle containing an excess of standard alkali solution.

Acidum Lacticum, Assay of.—The present U. S. P. method is unreliable and gives too low results. Murray's or the German Pharmacopoeia method should be adopted. If adopted, the standard should be raised to not less than 85 per cent.

Aqua Hydrogenii Dioxidi, Determination of Acetanilide in.—The following method gives nearly accurate results: Shake out about 200 Cc. H_2O_2 with 4 portions of chloroform, 25 Cc. each. Evaporate the chloroform on steam bath, dry residue at a temperature not higher than 60° C. and weigh as acetanilide.

A standard solution of acetanilide in H_2O_2 gave 100% of the acetanilide by this method.

The recovered acetanilide is white in new lots of H_2O_2 and slightly brownish in very old lots. However, in the latter case the melting point is only one or two degrees below the standard of pure acetanilide (113° C., U. S. P.).

The chloroform also extracts acetanilide decomposition products having an odor like nitrobenzol; but as these are volatilized on drying the recovered acetanilide, they do not affect the result.

Arseni Trioxidum, Assay of.—The following method has proved more convenient to us: Dissolve the weighed sample in a little KOH Test Solution (Heat may be applied). Make acid with HCl, make again alkaline with $NaHCO_3$ and add 1 or 2 Gm. more of $NaHCO_3$. Dissolve and titrate back with N/10 Iodine.

In the U. S. P. method it is very difficult to dissolve 0.1 Gm. As_2O_3 in 20 Cc. of water and 1 Gm. $NaHCO_3$ with a gentle heat and there is also the possibility of forming normal sodium carbonate which would use up some iodine.

Cocainae Hydrochloridum, Identification of.—A *strong* solution of cocaine hydrochloride in diluted HCl is necessary in applying the potassium chromate test. The U. S. P. directs "a HCl solution of the salt." In *too* dilute solutions no reaction takes place.

Copaiba.—This product rarely answers the requirement for solubility in petroleum benzin. As a rule considerable insoluble matter is left, even with samples the purity of which is unquestionable. In testing for Gurjun balsam,

Turner's nitrite test should be adopted, as has been done by the new edition of the German Pharmacopoeia.

Creosotum.—A better phraseology for the test for "difference from and limit of Phenols" would be, "if 1 volume of creosote be mixed with 1 volume of 95% glycerin, a clear mixture will result, from which a creosotic layer, equal to or greater in volume than the creosote employed, will separate on the addition of *water to the extent of one-fourth the volume of the creosote—glycerin mixture.*"

In the test for solubilities the sentence, "Soluble in all proportions in acetic acid" should read, "Soluble in all proportions in *glacial* acetic acid."

Definitions Wanted:

What is meant by *"colorless"?* A definition is needed. What depth of liquid is required? What width of tube should be employed? It would be advisable to use in all cases Nessler's tubes or jars. A liquid may be colorless on looking through the tube transversely, but may show an appreciable coloration on looking through the liquid vertically from top to bottom of the tube.

What is meant by *"parts"?* A statement should be included to make clear that "parts" as used in stating solubilities means "parts by weight." No other interpretation is at all likely in the case of solids, but, after noting the solubility of chloroform in water, which is given in "volumes," a wrong interpretation of "parts" as applied for example to cresol, creosote, and bromine, might result.

What is meant by *"unweighable residue"?* This statement should be defined. In the German Pharmacopoeia it is defined as "less than 1 mgm." For example: A sample of yellow oxide of mercury gave 0.0002 Gm. residue in test for "absence of many foreign salts." Is this considered to be unweighable?

The same sample gave 0.0008 Gm. residue in "limit of foreign metals." A second sample gave 0.0011 and 0.0004 Gm. respectively. A third sample gave 0.0018 and .0004 Gm. respectively. A fourth sample gave 0.0004 and 0.0006 Gm. respectively.

Speaking of yellow oxide of mercury, we found it unfair to this product to run the U. S. P. tests for "absence of foreign salts" and "limit of foreign metals" without running a blank test at the same time, as in many cases the blank gives as high as 0.0005 Gm. residue.

Fluidextractum Frangulae, Preparation of.—The U. S. P. process seems to give a product which contains only about 70% of the emodin found by the assay of the drug.

A sample of the bark, which assayed 1.141% emodin gave a U. S. P. fluidextract assaying only 0.778% emodin, or 68.2% of the emodin found in the drug.

Fluidextractum Sennae, Preparation of.—As in the case of fluidextract of frangula, the U. S. P. process seems to give a product containing only about 70% of the emodin contained in the drug.

A sample of senna leaves, which assayed 0.667% emodin, when made into a fluidextract by U. S. P. directions gave a fluidextract assaying only 0.479% emodin or only 71.9% of the emodin shown to be contained in the drug.

Glandulae Thyroideae Siccae.—In the test for "inorganic iodine," the phrase "A cold extract of desiccated thyroid glands" should read "A cold *water* extract of desiccated thyroid glands."

Liquor Formaldehydi, Assay of.—In assaying, the flask should be shaken occa-

sionally during the thirty minutes standing, or until gas bubbles are no longer formed on shaking. The reaction proceeds slowly at times and thirty minutes *without* shaking is insufficient. The reaction is only complete when gas bubbles are no longer liberated on shaking.

Mel, Test for Cane Sugar in.—It is to be presumed that the U. S. P. test for "absence of cane sugar" is intended to provide a means of testing for non-reducing sugar. As such, the test is unreliable. A rather complicated but reliable substitute is the method of reduction of an alkaline copper (Fehling's) solution before and after inversion treatment with dilute acid, the difference in the amounts of cuprous oxide found being calculated as sucrose.

As an illustration: A sample "B" gave a dark zone at the end of one-half hour and a sample made up in our laboratory from the fresh combs also gave a dark zone, but not as dark as the "B" sample.

"B" sample assayed 72.90% reducing sugar.

Laboratory sample assayed 65,80% reducing sugar.

"B" sample assayed 1.25% non-reducing sugar.

Laboratory sample assayed 9.72% non-reducing sugar.

While the U. S. P. test would indicate that the "B" sample contained more non-reducing sugar than the sample made from fresh combs in the laboratory, the cupric-reducing power proved this to be not the case. A "limit" of sucrose is needed.

Melting Point of Waxes, etc., Determination of.—We have found the following to be a good method: A piece of thin glass tubing about three-eighths inch in diameter and about three inches long is heated in the Bunsen flame about one inch from one end until the walls fall in and form a constriction with a capillary opening. To use this device, the smaller end is pressed into the wax up to the constriction. The device is then bound to a thermometer and both are suspended in a beaker of water so that the constriction is about one inch below the surface. Heat is applied with constant stirring of the water. When near the melting point, the temperature is raised at the rate of one degree in two minutes. When a drop of the melted wax passes up through the constriction or capillary opening, the melting point is indicated. The melting point is very easily observed as it is quite sharp. This method is much better than the "drop of mercury" method, which we formerly used, the trouble being that with this method the melting point is not sharp, as it sometimes requires two or three minutes for the drop of mercury to fall through the melted wax.

Melting point methods for such substances as petrolatum, lanum, etc., should be described and adopted.

Myrrha.—The sentence, "It does not swell or dissolve in water," should read, "It does not swell or *completely* dissolve in water," in view of the fact that myrrh contains considerable water soluble gum.

Oleum Eucalypti. Assay for Cineol.—We have found the following procedure very satisfactory: Introduce into a beaker a solution prepared by dissolving 10 Cc. of the oil in 50 Cc. purified petroleum benzin; immerse the beaker in a freezing mixture and add phosphoric acid U. S. P. (85%), drop by drop, with constant stirring until 12/15 Cc. have been added and the magma of cineol phosphate formed is bulky, granular, and pinkish in color; then stir occasionally for

one-half hour. Transfer the magma quickly and completely to a force-filter, wash it several times with cold purified petroleum benzin and then press it between two porous plates until a dry, white powder (cineol phosphate) is obtained. Finish like U. S. P.

The indefinite quantity of phosphoric acid in the U. S. P. method is apt to produce trouble for the novice, as an insufficient quantity will result in an incomplete separation of the cineol and an excessive amount will result in a sticky magma which is difficult to handle and dry and almost impossible to wash properly. The stated amount of phosphoric acid—namely 12/15 Cc.—has proved satisfactory in our work, with oils ranging from 50-80% cineol, while 20 Cc. has produced the sticky magma mentioned above.

Oleum Olivae, Elaidin Test for.—None of the samples tested during the last few years responded properly to the elaidin test, and rarely gave a "whitish granular mass" in the freezing test. It is suggested that a thorough investigation of these tests be made.

Oleum Terebinthinae, Test for Hydrocarbons in.—The U. S. P. test for "absence of petroleum benzin, kerosene or similar hydrocarbons" should have a time limit upon it as the "clear layer" is small or large in proportion to the time the mixture is allowed to stand. "After the dark mass has settled" is very indefinite; in fact, there is usually no "dark mass."

Illustrations: (1) 0.35 Cc. clear layer after one-half hour; 0.35 Cc. after 45 minutes and 0.45 Cc. after 15 hours. (2) 0.35 Cc. clear layer after one-half hour and 0.6 Cc. after 15 hours. (3) 0.4 Cc. clear layer after one-half hour and 0.7 Cc. after 15 hours.

Later experiments show that vigorous shaking of the sulphuric acid-turpentine mixture in the burette after cooling leaves smaller and in some cases practically no clear layers, even after 24 hours standing. Is such shaking allowable?

Resina Podophylli.—We have found that the alcohol soluble matter is always low and the water soluble matter always high. Some examples:

Alcohol soluble: 92.2, 98.0, 95.6, 93.6, 92.8, 92.2, 93.9, 92.2;
Water soluble: 35.5, 35.9, 45.1, 42.0, 41.1, 42.0, 39.3, 26.1.

U. S. P. standard is "not less than 99% soluble in alcohol and not more than 25% soluble in water." Are not these requirements too rigid?

Saccharum Lactis, Test for Cane Sugar in.—The U. S. P. test for "absence of cane sugar" is unreliable. The Leffmann-Oliver Sesame Oil test is an excellent substitute. Samples leaving 0.152 and 0.142 Gm. (instead of not more than 0.03 Gm.) in the U. S. P. test were proved free from cane sugar by means of this test.

The Leffmann-Oliver Sesame Oil test for cane sugar is made as follows: Dissolve 0.1 Gm. of the sample in 4 Cc. concentrated hydrochloric acid and add 4 Cc. of sesame oil. Shake vigorously for one-half minute and allow to stand.

Approximate estimation:

Cane sugar 1% gives faint pink color in 12 minutes.
Cane sugar 3% gives faint pink color in 5 minutes.
Cane sugar 5% gives faint pink color in 4 minutes.
Cane sugar 10% gives faint pink color in 2 minutes.
Cane sugar 100% gives faint pink color immediately.
Milk sugar 100% gives faint pink color in 15 minutes.

The reagent must be made up freshly for each test.

Sapo Mollis, Test for "limit of free alkali" in.—A suggested improvement is as follows: Dissolve the soap in absolute alcohol with the aid of heat, filter, and reserve the filter and contents for the determination of potassium carbonate. Titrate the filtrate with N/10 oxalic acid using phenophthalein as indicator, and calculate the alkalinity as potassium hydroxide (KOH).

Then place the filter and contents in a flask, add a little water, shake to dissolve the potassium carbonate, if any, and titrate with N/10 sulphuric acid, using methyl-orange as indicator. Calculate as K_2CO_3. Limits should be specified. We have seen many soaps which did not give an alkaline reaction with phenolphthalein, but did so with litmus.

In conclusion, we beg to state that if methods for the determination of alcohol in galenicals are to be adopted, we would be glad to submit a description of the methods used by us and the modifications which we have found necessary in applying them to different preparations.

ANALYTICAL LABORATORY OF THE H. K. MULFORD COMPANY.

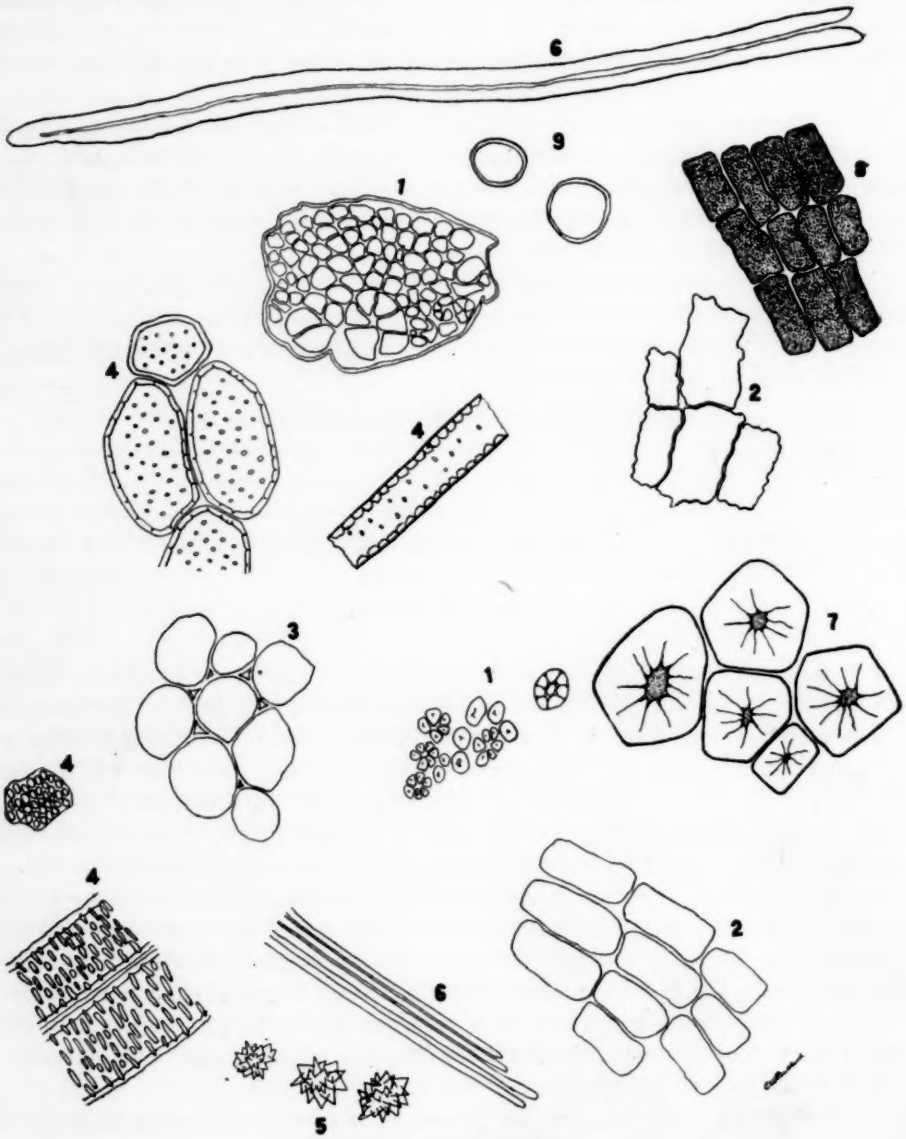
August 8, 1911.

NOTE ON TRUE SCAMMONY AND MEXICAN SCAMMONY ROOT.

CHARLES W. BALLARD.

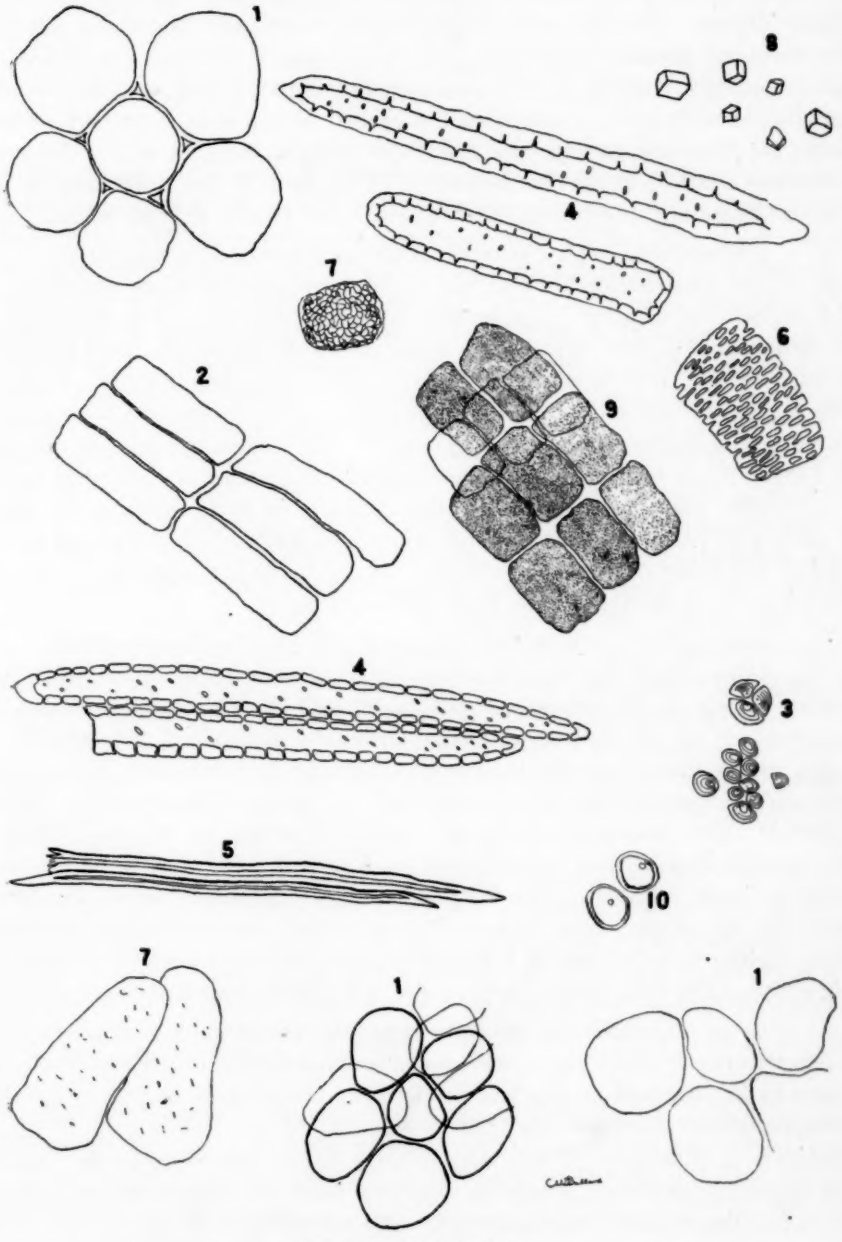
For the past year or two the root of *Ipomoeia Orizabensis* has been imported in large quantities under the name of Mexican Scammony root. The reason for this lies in the fact that the genuine scammony root is becoming scarcer and therefore higher in price than heretofore. Whether this root of *Ipomoeia Orizabensis* is identical with the genuine scammony in therapeutic effects and yields a resin having similar properties is a subject for pharmacologists to determine. There can be little doubt, however, that pending such determination it is hardly an ethical proceeding to market the Mexican scammony as the genuine article. It may be as good therapeutically but it sets a bad precedent and there is always the tendency to apply the same rule in the case of inferior substitutes. This results in the physician condemning the drug as unreliable or uncertain in action and such drugs ultimately drop into disuse not through any fault of their own but as the result of wide latitude in the use of other species supposedly as active as the official.

The subject of scammony is scarcely treated in text-books dealing with the subjects of powdered drugs and the Mexican variety is not even mentioned in most. This is not surprising because most of these volumes deal with the more common drugs and one can refer to any of them and find good descriptions of these. But when one tries to obtain references on drugs not in everyday use, he finds that they are lightly passed over in most cases and in many more are not mentioned. There seems to be great need of an abstract or index dealing with subjects of pharmacognosy, as at present one may spend days in search of light upon a certain subject and it is often more expeditious to work the problem out rather than search for material.



MEXICAN SCAMMONY.

1. Parenchyma containing single and compound starch grains.
1'. Separate starch grains.
2. Longitudinal parenchyma.
3. Transverse parenchyma.
4. Ducts and tracheids.
5. Rosette crystals.
6. Fibers.
7. Stone cells.
8. Epidermal tissue.
9. Oil globules.



TRUE SCAMMONY.

1. Transverse parenchyma.
2. Longitudinal parenchyma.
3. Starch grains.
4. Tracheids.
5. Fibers.
6. Section of duct.
7. Resin masses.
8. Cubical crystals.
9. Epidermal tissue.
10. Oil globules.

Even in microscopic appearance there is considerable difference in the two roots, the Mexican being much darker and larger, usually transversely sliced to facilitate drying. The Mexican is also deeply ridged and furrrowed externally. Upon breaking genuine scammony root we obtain a peculiar cheese-like odor which is entirely wanting in the Mexican, the latter having an odor somewhat resembling licorice root. Examining the broken or cut ends, a further difference is seen; the Mexican having well defined concentric rings of wood, the genuine has bundles isolated from one another. Then there is the difference in color; Mexican being dark dull brown, while the genuine is of a grayish white.

MICROSCOPIC APPEARANCE OF POWDERED MEXICAN SCAMMONY.

One of the most noticeable features of the powdered Mexican scammony root is the presence of a rather large number of rosette crystals. The fibers are long with comparatively thin walls. Few stone cells may be found, these being large and thick walled, with small cavity, having lines radiating from it. The starch which is plentiful has a cleft or dot hilum and in many cases the grains appear to be compound consisting of five or six granules. The parenchyma is of well defined cells usually filled with starch. Upon examination of several specimens of Mexican scammony root the oil globules were found to be fewer than in the genuine. The epidermal tissue presents nothing very noteworthy. The ducts and tracheids are all of the pitted or reticulate variety. Just beneath the epidermis there sometimes occurs a parenchyma with wavy walled cells.

MICROSCOPIC APPEARANCE OF POWDERED GENUINE SCAMMONY.

The genuine scammony root in powder may at once be distinguished from the Mexican variety by the presence of cubical crystals in fairly large numbers. The parenchyma is of the loose type having very few cells filled with starch. The starch is much less in amount than in the Mexican and smaller. The grains are single and compound, the latter consisting of two to four granules. A large number of thick walled tracheids are found, separate or in conjunction with fibers smaller and thinner walled than in Mexican. Oil and resin masses are present in large number. The ducts are not as numerous as in the Mexican variety but are of the same types. The epidermal tissue as might be expected is much lighter in color than in Mexican and the cells are smaller and more regular in shape. The resin masses and oil globules are yellowish in color.

ACTION OF REAGENTS ON THE TWO RESINS.

Upon trituration of the resins with water a milky fluid is obtained. The product appears to be identical in physical properties. There may be minor differences in composition as the following tests show.

Addition of potassium dichromate solution to the emulsion of the true resin gives an orange reaction. With the Mexican resin the same reaction is obtained at first, but the mixture rapidly darkens into a brown shade.

Upon addition of ammonia water the Mexican resin slowly precipitates; the genuine gives a yellow mixture.

Upon addition of ferric chloride solution followed by Lugol's solution a chocolate brown is obtained in the case of Mexican resin, and a black in the genuine resin.

COLUMBIAN UNIVERSITY, COLLEGE OF PHARMACY.

THE PHARMACOPŒIAL STANDARD FOR DESICCATED THYROID GLANDS.

REID HUNT AND ATHERTON SEIDELL.
[Divison of Pharmacology, Hygienic Laboratory, U. S. P. H. and M. H. Service, Washington, D. C.]

During the past few years a great many experiments have been made in this laboratory upon the relation between the physiological activity of thyroid and its iodine content. These experiments and practically all that have been described in the literature demonstrate this parallelism; it may therefore be concluded that at present the most satisfactory way to standardize thyroid is by means of the determination of the originally combined iodine which it contains. From the standpoint of the Pharmacopoeia the question resolves itself simply into the selection of the most satisfactory method for the iodine estimation and the adoption of the most reasonable percentage content of iodine as the standard.

Of the methods which may be used for the determination of the iodine there are only two which need to be considered, viz., the older Baumann method which consists of fusion with caustic alkali, liberating the iodine by suitable means from the aqueous solution of the fused residue, extracting it with an immiscible solvent, and estimating its quantity colorimetrically, and the recently proposed Hunter method, which differs from the above in substituting alkali carbonates for the fusion, conversion of the iodine to the iodic state, and estimating its amount by a volumetric procedure. Of these two methods the latter has been found by us to possess advantages both in reliability of the results, and convenience of execution. Furthermore, from the point of view of the Pharmacopoeia it possesses the advantage over the Baumann method that no analytical procedures, volumetric solutions, or reagents, new to the present edition of the Pharmacopoeia, are required.

In his original paper* Dr. Hunter gives very clear and explicit descriptions of all the details of the process, and there is consequently little opportunity for uncertainty in regard to any part of the method. It is the rule, however, in pharmacopoeial descriptions of analytical processes, that only the essential features be included, consequently it appears desirable that a concise description of the Hunter method, in what may be called pharmacopoeial language, be given. Such an outline would be as follows:

Determination of Iodine (Hunter Method). One gram of desiccated thyroid gland is mixed in a nickel crucible of about 125 Cc. capacity, with 15 grams of a mixture composed of 138 parts by weight of anhydrous K_2CO_3, 106 parts anhydrous Na_2CO_3 and 75 parts KNO_3, and an additional 5 grams of this fusion mixture spread evenly over the surface. The crucible is then heated over a free Bunsen flame until no further carbonization is observed, it is cooled and the friable residue dissolved in about 150 Cc. of distilled H_2O. To this solution contained in an Erlenmeyer flask of about 500 Cc. capacity, is added approximately 50 Cc., or its equivalent, of fresh liquor sodae chlorinatae U. S. P. (containing 2.4 wt. per cent Cl). The mixture is then treated with enough phosphoric acid (1 volume of the 85 per cent syrup and 1 volume of H_2O), to produce a marked yellow tint

* Hunter: Jour. Biol. Chem., 2, 321-349, 1910.

of free chlorine, and an additional 10 Cc. of the phosphoric acid is then added and the contents of the flask boiled for about one-half hour or until the volume has been reduced to about 150 Cc. The liquid is cooled, 10 Cc. of 1 per cent aqueous KI solution is added and the liberated iodine titrated with N/200 sodium thiosulphate, adding starch paste as the indicator just before the end of the reaction.

The N/200 thiosulphate may be made by diluting 25 Cc. of exactly N/10 thiosulphate to 500 Cc., it changes strength rapidly and should be prepared fresh at each time determinations are made. One Cc. of N/200 thiosulphate corresponds to 0.0001058 Gm. iodine derived from the sample of thyroid used.

This method has been tested in this laboratory in comparison with the Baumann method, upon quite a large number of samples of commercial desiccated thyroid glands. The agreements in duplicate determination by the Hunter method were found to be considerably more uniform than those by the Baumann method, and the results in practically every case were from 10 to 15 per cent higher. Since there is a reasonable source of loss at one step of the Baumann method, viz., the acidification of the aqueous solution of the fusion residue, and this particular cause of loss has been obviated by Hunter in his method, there can be little doubt that the higher results are the nearer correct.

Of the commercial samples which we have so far examined, some were purchased on the market during 1907, and the others recently received direct from two American firms which prepare thyroid glands for medicinal use. For these latter we herewith acknowledge our indebtedness to Armour & Co., and Parke, Davis & Co. The samples received direct are portions of the several lots prepared at the particular dates shown in the table.

PERCENTAGE OF IODINE IN COMMERCIAL DESICCATED THYROID U. S. P. AS DETERMINED BY THE HUNTER METHOD.

Lab. No.	Source		Per ct. I.
99	P. D. & Co.	(1907)	0.185
99 (a)	"	"	0.185
100	"	"	0.188
101	"	"	0.153
102	"	"	0.162
103	"	"	0.219
105	"	"	0.138
106	"	"	0.218
106 (b)	"	"	0.212
116	"	"	0.118
117	"	"	0.117
118	"	"	0.158
Average, 0.171.			
358	"	(1911)	0.206
359	"	"	0.206
360	"	"	0.154
361	"	"	0.214
Average, 0.195.			

Lab. No.	Source		Per ct. I.
104	Armour & Co.	(1907)	0.138
107	"	"	0.145
108	"	"	0.138
109	"	"	0.141
109 (a)	"	"	0.142
119	"	"	0.135
120	"	"	0.129
121	"	"	0.140
Average, 0.138.			
345	"	Dec. 16, '09	0.279
346	"	Jan. 23, '10	0.095
347	"	Feb. 15, '10	0.212
348	"	April, '10	0.162
349	"	May, '10	0.146
350	"	June, '10	0.271
351	"	July, '10	0.202
352	"	Aug., '10	0.231
353	"	Sept., '10	0.215
354	"	Oct., '10	0.144
355	"	Nov., '10	0.252
356	"	Jan. 16, '11	0.219
Average, 0.202.			
357	Thyroid Proteid (Armour)		0.607

From the above results it is found that the average of the twelve P. D. & Co. samples received in 1907 is 0.171 per cent I., while that for the Armour samples is 0.138 per cent. On the other hand the average per cents for the recent samples are respectively 0.195 and 0.202, thus showing that in both cases products with higher iodine contents are being prepared. On the whole these results show a very commendable degree of regularity in the percentage of iodine in thyroid at present on the market. With very few exceptions none of these samples might be expected to produce a noticeable variation in physiological effect. There can be no doubt, however, that the interests of both the producer and consumer would be safeguarded by the establishment of a reasonable pharmacopoeial standard of iodine content. Judging from the results upon the samples supplied by the manufacturers themselves, such a limit could be fixed at approximately 0.2 per cent I without causing an undue hardship. This per cent has already been adopted by an English firm. Of course sufficient latitude, of say 0.03 per cent above or below this figure, should be permitted, thus making the extreme limits 0.17 to 0.23 per cent iodine.

The remaining pharmacopoeial description which is necessary is that limiting the source of the raw material to certain animals and prescribing a reasonable limit of moisture and ash, which from our experiments might be placed at not exceeding 6 per cent for the former and 5 per cent for the latter, and finally the prohibition of all iodine in inorganic or any other form of combination than that peculiar to the thyroid.

In regard to the ash content it should be mentioned that in general those samples with the higher percentage of iodine contain the lower percentage of ash, and vice versa. Thus for instance, of 12 samples containing more than 0.2 per cent iodine the variation in the ash content was from only 3 to 4 per cent, while 6 samples containing approximately 0.15 per cent iodine contained more than 4 per cent ash, and one sample with only 0.095 per cent iodine contained more than 5 per cent of ash.

It has recently been suggested by certain investigators that the iodine of thyroid may not all be present in an equally physiologically active form, and consequently that it was possible by certain manipulative processes to remove the less active forms and retain the more active portion in a product which is therefore supposed to contain iodine in a super active condition as compared with that of the untreated material. A number of experiments which we have recently made with one of these products, designated as thyroid proteid, have failed to confirm this hypothesis. These recent experiments indicate even more conclusively than our previous work, the constant behavior of the thyroid-iodine substance and the close relation between the iodine content and the physiological activity of both the desiccated thyroids and the new thyroid proteid.

ASSAY OF FLUIDEXTRACT OF SANGUINARIA.

(Blome's Modification of Schlotterbeck's Method.)

H. B. MEADE.

The following is Blome's modification of Schlotterbeck's method for the assay of sanguinaria, adapted to the fluidextract:

Fluidextract	5 Ccs.
Ether	q. s.
Chloroform	q. s.
Alcohol 95%	q. s.
Ammonia Water	4 Ccs.
Water	q. s.
Sulphuric Acid N/10	10 Ccs.
Potassium Hydrate N/50	q. s.
Phenolphthalein	q. s.

Shake 5 Ccs. of the fluidextract well for one minute with 10 Ccs. of water, 4 Ccs. ammonia water, and 20 Ccs. ether. Let separate completely and draw off ether. Shake out aqueous solution with 15 Ccs. of ether. After drawing off the ether, add 5-10 Ccs. of 95% alcohol, as a black finely divided deposit occurs at this point (if not after the first shake out), which apparently retains some alkaloid. The sediment is probably extractive, precipitated by the extraction of the alcohol with the ether. Shake with successive portions of 10 Ccs. of ether until a small amount of ether (after evaporation, and treatment with dilute HC) gives no precipitate with Mayer's reagent, four treatments usually being sufficient.

Evaporate the ether, dissolve the residue in a few (preferably two or less) Ccs. of chloroform, add 5 Ccs. (measured) of N/10 H_2SO_4 and 10 Ccs. of water. Evaporate the chloroform, stir well, and when cool, filter solution through paper into a 100 Cc. volumetric flask, or graduate. Repeat the extraction of the alkaloid in the same manner from the gummy residue, using decreasing amounts of 3 and 2 Ccs. of N/10 H_2SO_4. Rinse the beaker, and wash filter with water.

Precipitate alkaloid with excess of Mayer's reagent, shake well, make up to 100 Ccs. with water and mix thoroughly.

Filter through dry paper, collect 50 Ccs., decolorize with sodium thiosulphate if necessary, and titrate the excess of acid with N/50 KOH, using phenolphthalein as indicator.

Multiply the number of Ccs. of acid required by 50 Ccs. of the clear filtrate by .035 and the result by 40 to obtain grams of alkaloid per 100 Ccs. of fluidextract.

NOTE—In shaking out with ether the author prefers to pour the ether out of the top of the separator, after drawing off as much as possible of the aqueous portion. The results as obtained—good, bad and indifferent—are all given. They show besides the value of the method, the deterioration of the fluidextract. It was found preferable to work on 5 Cc. rather than 10 Cc. portions.

The results obtained April 10, 1911, were by a junior pharmacy student, who

had no experience in drug assaying and simply followed directions, which speaks well for the method.

Date of Assay	Amount Worked On	Gms. Alkaloid per 100 Ccs.	Remarks
February 21, 1911.....	10 Ccs.	2.58	
		2.52	
March 29, 1911	5 Ccs.	3.23	Work interrupted. Probably absorbed ammonia upon standing for some time.
		3.17	
April 10, 1911	5 Ccs.	2.77	L. P. Griesmer assayed.
		2.69	
May 25, 1911	5 Ccs.	2.60	Deposit in bottle.
		2.02	Inexplicably bad.
May 31, 1911	5 Ccs.	2.41	
		2.35	
June 1, 1911	10 Ccs.	2.23	
		2.31	

Laboratory of Prof. Charles H. LaWall.

THE QUALITY OF SERVICE.

"No druggist can make headway selling disinfectants if the odor of his soda fountain is like that of a fish market on Sunday. No druggist can pose as an authority on razors, shaving soap or bay rum who has three days' scraggly growth of whiskers on his chin. Toilet preparations will not be bought from a man in a dirty collar and soiled hands. To sell an article a man must seem to be an authority on it, and to be an authority he must show some evidence of having used the article he is selling.

"All these things are simply branches of that one item of *service*. I would rather have a clean, polite clerk who couldn't tell moth balls from menthol after he smelled them, than a dirty, grouchy graduate from the best pharmaceutical college in Christendom! You can teach a man pharmacy, but you can no more teach politeness and cleanliness to a man than you can teach a razor-back hog to be a Berkshire! It's got to be born in the man and the hog! Pick your clerks with this in mind, and then every morning when you open your pill parlor ask yourself the question, 'What can I do today to better the *service* of this store?' and then keep right on repeating it after each customer, like a schoolboy adding the word 'Excelsior' after each verse of Longfellow's poem by that name. Make this the chorus of your song, make it the aim of your life, and you will as surely succeed in business as the sun shines.

"Ready-made success can be handed to no man! He's got to make it for himself, and the one item of *service* will go further toward it than any other. To win without it is about as easy as it is for a canary bird to teach a rattlesnake to turn handsprings!"—*Roe Fulkerson in So. Pharm. Journal.*

Section on Education and Legislation

Papers Presented at the Fifty-Ninth Convention

CONSERVING THE WASTE FROM THE EDUCATIONAL MILL.

J. W. STURMER, LAFAYETTE, IND.

For years the annual crop of graduates in pharmacy has been far short of the demand. Unfortunately owing to certain economic conditions (which we cannot alter) we need not at present expect an increase in pharmacy matriculants at all commensurate with the increase in the demand for graduates. In the language of the manufacturer, our supply of crude material is falling short. A shortage of crude material arouses interest in waste conservation.

The crude material which goes into the educational mill is the most precious of all crude material. No waste deserves greater attention and study than does this waste of human grist. How much of it is needless waste?—how much of it reclaimable?—how can we reclaim it? These questions set forth problems which are not new in pedagogic circles. But owing to the peculiar conditions now obtaining in pharmacy it is hoped that pharmacists generally may become interested in these problems as far as they pertain to pharmaceutical education; for it is the pharmacist in business—the preceptor of prospective students—whose aid the pharmaceutical educator would solicit in the work of reducing the percentage of failures in schools of pharmacy.

A college course operates inevitably as a sifter. There is bound to be shrinkage in the classes during the college year. Nearly five per cent may be expected to leave school because of sickness or physical disability. Another five per cent probably find that they have been too optimistic in their expectations of earnings at college, and must needs leave because of the unsatisfactory condition of their exchequer. Some fail because of inadequate preparation. Others because they lack inherent mental ability—nature having intended that they become "hewers of wood and drawers of water." These latter are of course irreclaimable; to coach them through to graduation would simply "clutter up" the waste baskets of the state boards of pharmacy; or what would be worse, the profession, with incompetents. Fortunately, the inherently unable seldom exceed *five per cent* of the class enrollment. (This is the writer's estimate based on a careful analysis of his own classes during the last six years, and no doubt is indicative—approximately at least—of the character of pharmacy students the country over.) Now let us see: If we estimate the losses due to sickness and to lack of funds, (medical, hygienic, or financial problems) at about 10 per cent in all, we have, on

adding the mentally incapacitated, i. e., five per cent, a total of 15 per cent, which furnish no pedagogic problems, and need not further concern us in this discussion.

But the average shrinkage in classes in schools of pharmacy the country over is about 35 to 40 per cent and, taking into account the length of course, exceeds the shrinkage in the classes of most other vocational schools. So we have approximately 20 per cent or more of the class enrollment dropping out before graduation for reasons deserving our closest scrutiny. Now there are many reasons why capable students may fail. Some of these reasons are of interest to no one except to the professional teacher, and hence will be omitted from this paper, which is addressed primarily to the retail pharmacists. Suffice it to say that educational institutions are carefully studying the problems involved in saving students from failure, and are making headway in the right direction—are getting results. But of the various reasons why capable students fail there are two which should interest not only teachers, but also preceptors or friends of prospective students. To set forth these two reasons to which may be attributed a very large percentage of failures is the special object of this paper.

In the first place, the writer would call attention to the great difficulty some new students experience in adjusting themselves to the conditions which obtain in the university and in the vocational school; conditions which differ radically from those to which the high school student is accustomed. In the high school he is assumed to be a rather irresponsible boy. His study hours and his recreation hours are mapped out for him as definitely as is his class schedule. And there is some one—parent or instructor—to see to it that each task is begun at the proper time, and is duly finished. At the university or vocational school there are, to be sure, a schedule of class work, and lessons definitely assigned. But each student is his own taskmaster when it comes to the outside study which must accompany the class work. As some one has said, a lesson is like a photographic plate: the text book is studied prior to class—the exposure; the instructor in class attends to the developing; and this in turn is followed by supplementary home study—the fixing. If the fixing is omitted, the image is evanescent, and much of the instructor's work is without lasting benefit to the student. Is it surprising that the student fresh from the high school, used to discipline and to a taskmaster, is apt to omit the "fixing"? He may realize in a general way that home study is necessary. But there are the theater, ball games, and other diversions. So Monday's work is postponed to Tuesday; on Tuesday something interferes, and the work of two days must be laid aside for a more opportune time, which, strange to say, fails to materialize. Naturally, work accumulates in geometric ratio, and before the student realizes the situation he is hopelessly behind. And this student may have been a success in high school. The secret of his failure is that he has not learned to boss himself—to be his own taskmaker. A few institutions, recognizing the difficulties incident to the transition from high school to college, see to it that the new student gets the *personal* attention of some member of the faculty, who acts in the capacity of adviser, and helps the student to adjust himself to the liberal government of the university or vocational school. It should be remembered, however, that some students are slow to enter into cordial relations with their instructors. When such relationship has finally been established, and the

student has become convinced that the motives of his adviser are really altruistic, he may, unfortunately, already have passed the stage during which recovery is possible. So we find, frequently, that more effective than an instructor's counsel is the advice from other sources—from the preceptor, or from a friend who has recently graduated. Strange to say, very few students enter college forewarned and hence forearmed. The young man who is planning a tour, the young lady contemplating matrimony, the old man who would "a-fishing go"—can find plenty of literature embodying the experiences of others. But the prospective pharmacy student will search in vain, even in the Boston library, for any article which could shed the light of experience upon his path. It seems that the "old grad" is loath to tell tales out of school—in print. And so each generation of pharmacy students is forced to travel (in this respect at least) on an unblazed trail.

Still other failures at college may be traced to the antipathy which the students involved manifest for so-called theoretical subjects. Many a pharmacy student enters upon his college work imbued with the opinion, which in some cases amounts to a deep conviction, that a retail pharmacist has no more use for science than " a frog has for tail feathers"; so he takes the theoretical work because it is obligatory, not because he expects to find it of practical use after graduation. Now is it not true that it is against human nature to do well work which is not considered useful, but is looked upon as a mere graduation requirement? Accordingly, the inevitable result is—unless the student's attitude is changed, and that at the outset—that he gets behind in the foundation subjects. Naturally, the more he gets behind the more distasteful does the subject become; and as the distaste develops he finds it more and more difficult to carry the work. We have here another vicious circle, in which cause and effect change places in rhythmic regularity.

No other vocational schools—surely not schools of engineering, or of medicine, or of agriculture—find it incumbent upon them to combat this invidious influence which endeavors to exalt commercialism by belittling scientific attainment. And we have here one, though not the only one, of the reasons why the percentage of failures in schools of pharmacy is exceptionally high.

Every college man of discernment recognizes the fact that retail pharmacy is a business; that commercial skill is desirable, indeed, is necessary. But as long as we have compounding and dispensing of medicinal materials, Pecunia must in Pharmacy remain wedded to Science: there can be no divorce. And as long as we have practical pharmacy in our curriculum, there must be the foundation for it. No house—nothing but a shack—can be built without a foundation.

So in conclusion: If you, Mr. Pharmacist, can send your clerk to college properly forewarned against the dangers of procrastinating habits of study—if you have inculcated an appreciation of thoroughness—if he has been made to realize that the public has a right to expect scientific and correct compounding, just as it has a right to expect unadulterated drugs—in short, if he has been taught to look upon pharmacy not as a refined method of separating the public from its money, but as an essential part of the world's work—you have done much to prevent his falling into the waste from the educational mill.

THE AIM OF PHARMACEUTICAL EDUCATION.

RUFUS A. LYMAN.

A perusal of the minutes of this section for a number of years back might lead one to think the further discussion of the subject of this paper to be superfluous. The time devoted to it, not only in the national but in the state associations and local branches and the space given to it by the pharmaceutical press shows the interest taken in, and the importance of the subject. Because of this fact, the writer believes the interchange of views at this time especially appropriate. Adverse criticism, coming largely from men engaged in the actual business and practice of pharmacy, has in recent years been directed towards the present day methods of pharmaceutical instruction. The statement is made that the curriculum is too academic, that the instructors are not practical men, that graduates in pharmacy are not at once practical druggists, that students are permitted to enter upon the study of pharmacy with little or no drug store experience, that the schedule is so full that there is no time for store experience during the college course, that students get no or a limited amount of instruction in the commercial aspect of pharmacy and so on *ad infinitum*.

The pharmaceutical curriculum as we now have it, is an evolutionary product. There has in recent years been a tendency on the part of school men to eliminate store experience as a requirement for entrance to or graduation from a school of pharmacy. Very few schools require either at the present time. It is interesting to note in how many catalogs we now find this statement, "Experience is not made a requirement for graduation from this school." It is an indication of what has been. It is probable that even that reference will soon be omitted. Now it seems that many good men take this to mean that the schools are making a special effort to minimize the importance of store experience. This is not so. Rather is it an attempt on the part of schools not to assume the responsibility for something for which they are not responsible and over which they have no control. There is a close connection between state universities and the secondary schools. In most Western states at least, a secondary school inspector is employed by the state, whose sole occupation is to investigate the work done in the secondary schools of the state, and to see to it that a required standard is maintained both as to the course given and the type of instructors employed. Suppose we require a year of store experience for entrance to our schools of pharmacy—how shall we determine the value of that experience—can the state be induced to maintain a salaried inspector for the purpose of passing upon the proficiency of the various proprietors in the state as instructors—or could it be gotten at through an examination? If so, how, and what would the applicant be expected to know? The same difficulties are met with when we come to pass upon store experience for graduation. It is logical that a school should be responsible only for what it teaches. No one denies or wishes to minimize the importance of store experience in the making of a finished pharmacist. The time when it should be acquired is the disputed point. The writer believes there is no question but that it should follow the study of the fundamental branches.

Everyone is familiar with the changes in the system of medical instruction in recent years. A few years ago such instruction was given only in the office of the preceptor. With the beginning of didactic and laboratory medical teaching, the importance of the preceptor began to wane until now he is unknown. Today no allowance in the way of credit or otherwise is allowed by our medical schools for experience acquired either in a physician's office or in a hospital. Medical men have long since recognized that in order to cope with the complex medical problems of today, it is necessary that the student be trained in the fundamental sciences, by the application of which medical problems are solved. The smattering knowledge, the isolated points which he may "pick up" by coming in contact with professional men are of little value to him. For years we have been telling the graduate in medicine of the things he will have to unlearn when he leaves school and enters the actual practice of medicine. But what a student who has obtained some scattered information through experience, must unlearn when he enters a modern medical school, can be appreciated only by those of us who come in daily contact with him. Our best medical students, as a rule, are those who have never come in contact with practitioners, never had any kind of a position about a hospital until they have reached such a point in their medical training that they are in a way to comprehend the problems presented. It is true that neither pharmaceutical education nor legislation has yet reached the same stage of development as has medical. Yet if pharmacy is a science, if it does have problems which require solution, why do not the same general principles apply in preparing the student for his work as applying in medicine?"

In my own state, my older pharmaceutical friends tell me that they think we should require at least one year experience in a store preliminary to entering the university. The argument which they advance is this, "A boy working in a store will learn what a funnel is, what a burette is and become familiar with the big botanical names, which are always a source of trouble, etc." The argument is weak. The funnel he should have learned to recognize years before when he used it to fill the jug from the old oaken bucket. Whether it be made of tin, glass, copper, or rubber, it should not long puzzle his imaginative mind. So far as the burette is concerned, most students would come to us unprepared. And finally, had he studied Latin grammar a year or so in the high school, botanical names would have been robbed of most of their terror. The members of the examining boards the country over, are practical pharmacists. After a student has had his school training, it seems logical that the members of the examining board are in a position to judge best when the applicant's practical experience has been sufficient to admit him to registration.

The profession has often accused pharmaceutical instructors of being impractical men. I take this to mean that most instructors in schools of pharmacy are not engaged in the actual practice and business of a druggist. This is undoubtedly true, yet it need not mean that such an instructor is not aware of the actual problems of the drug business. In every line of educational work we meet with the same condition. It was only a few years ago that in medicine, the chemist, the physiologist, the anatomist, the pharmacologist, were all practitioners. Now the practitioner-teachers have given way to the research-teachers, who know little of the actual practice of medicine, but better than any one else the actual problems

of medicine. And who will gainsay that these students who receive their training from these men will make better practitioners than those of a decade or two ago? This same policy with the research type of teacher is even being extended to clinical medical teaching.

The average student's mind shows a perversion with reference to the purpose of pharmaceutical training. The all-important question to him is how to pass the state examining board. To him, that examination is the only obstacle in his path to future progress and prosperity. His idea is fostered by certain institutions, that make it a business of all but guaranteeing to a student the assurance that, for a certain consideration, they will, in the space of from three to six months, put him in position to pass any board in the Union. The sad part of it is, that in the majority of cases they can do it, too. Another type of institution advertises the "Come at any time, stay as long as you can, pay only for what you get," or, "We do not charge exorbitant prices and our students pass the board." Recently the writer heard a prominent Eastern pharmacist say that the day of the diploma mill had passed. Certainly he is not conversant with conditions in the Middle West. It has become chronic for the prospective pharmacy student to inquire, "Do most of your graduates pass the state board?" Even more respectable schools have played to the galleries and in the senior year, instituted courses which consist of a more or less extensive cramming of the compiled lists of board examination questions. This gives the student the impression of its being the chief end of pharmaceutical training. I have known cases where the giving of such courses has been the factor which caused a young man to make the final decision in the choice of his future alma mater.

There has been a popular demand for courses in our schools which familiarize our students with the commercial side of pharmacy. Some of us, in an attempt to please our friends, have introduced such courses under the names of business methods, accounting, etc. They consist of a few lectures, or at best of one or two hours a week for a semester. Such courses may be entertaining to the student, but they have little or no educational value. Such information can be acquired to much better advantage, under present conditions, by store experience.

It is impossible to add more courses to the curriculum without lengthening the course another year. This would meet with much opposition from certain quarters. And it is impossible to outline a course of study of any length which will cover each and every phase of work that may arise in pharmaceutical business and practice. Why should we not in pharmacy, as we have in medicine, forget that there is a separate general chemistry, general botany and general physiology for students of pharmacy? Chemistry is chemistry, botany is botany, and physiology is physiology, no matter which variety of student we may have before us. The writer maintains that the reform most needed in our present method of teaching is to so train students in the fundamental sciences that they acquire independent methods of work and ability to apply such methods to the study of the problems, varied as they are, which the business and profession presents. Such training will elevate the professional status of pharmacy and can in no way injure pharmacy as a business.

PROPOSED NATIONAL LEGISLATION AFFECTING PHARMACY.

FRANK H. FREDERICKS, LL. B.

At no one time has there been pending in Congress so much proposed legislation, vitally affecting pharmacy, as at the present. Within a year the national law-making body is likely to act on three very important measures, on all of which the pharmacists of this country should be heard, and regarding which they ought to be of practically one mind and one voice in order to avoid direct harm to their business interests, and in order to assure the largest measure of public good. Every organized body of pharmacists would apparently fail in its duty if heedless of the proposed anti-narcotic law, of the proposed law to establish a Department of Health, and of the proposed amendment to the Food and Drugs Act. The pharmacists of the country should be in the very foreground to point out what in this connection is needed, and what would be harmful; to insist upon such provisions which will best accomplish the desired purposes, and which will advance pharmacy rather than retard its progress.

It would be quite impossible to here give extended consideration to the various legislative proposals but it may serve a purpose to touch as briefly as circumstances will permit, upon some of the features which appear in each of these measures as directly concerning pharmacy and the retail druggist.

THE FOSTER AND MANN ANTI-NARCOTIC BILLS.

Undoubtedly the greatest credit for restrictive legislation governing the sale and use of narcotic drugs, belongs to the pharmacists of this country. Up to this time, such legislation has been limited to the different states. Its enforcement, wherever successful and effective, has rested almost entirely with Boards of Pharmacy, and through this source there has been demonstrated the entire insufficiency of state legislation in order to effectively curb the habit forming drug evil. It is natural, therefore, that from among the pharmacists in different parts of the country, should come a demand for national legislation. It must be granted that in demanding such legislation pharmacists place restrictions about themselves, and yet for the public good, they are not only willing but glad to do so. Such being the case, is it not proper and just, that they should have a large voice in framing this necessary legislation? A little more than a year ago there was introduced by Congressman Foster, of Vermont, the first bill on this subject, which during the present special session of Congress has been followed by another bill introduced by Congressman Mann, of Illinois. The purpose of both bills is undoubtedly the same. The means for accomplishing the desired purpose are entirely different. In the Foster bill, proper control over this traffic is sought by an exercise of the power to tax, while under the Mann bill a similar result is sought under the power to regulate inter-state commerce. The Mann bill, though by far the simpler of the two proposed measures, seems to be defective, in that it is very doubtful whether the intended method, under an exercise of the power to regulate inter-state commerce, is constitutional. This method consists in limiting transportation of such drugs to physicians, dentists, veterinarians and manufacturers, jobbers and retail dealers in drugs. Undoubtedly this would be an indirect

exercise of the police power, which belongs exclusively to the different states. It would seem that while Congress may prescribe what shall and what shall not enter inter-state commerce, it nevertheless cannot say who may or who may not be engaged in any particular class of inter-state commerce. Then again, while the evident intent of the Mann bill is to limit the final traffic to the retail drug trade, such intent will fail entirely in that so far as the national government is concerned, any individual may be, or may become, a retail dealer in drugs. Failing in this essential respect, it would seem that the present Mann bill must fail entirely. Now as regards the Foster bill, which seeks control over the distribution of habit-forming drugs, through the taxing power, there can be no doubt but that in the exercise of such power, sufficient control can be secured and the writer believes that this can only be done by such exercise of the taxing power. However, as originally introduced by Congressman Foster, his bill will work considerable hardship, especially upon the retail druggist, and seems to involve an unnecessary amount of red tape. There can be no good reason at all for requiring retailers to be bonded; there can be no sufficient reason to require retailers to keep books of every sale, and to make returns; there can be no excuse whatever for taxing the domestic manufacturer on his imports of opium, cannabis, coca leaves, and allowing foreign manufacturers to ship into this country without being subject to such tax, the salts and derivatives of these drugs, unless the tariff duty provides for this feature, which is not believed sufficiently to be the case. It is a question also whether preparations made on physicians' prescriptions should be exempted, though the possible harm from such exemption may by far overcome the possible need for it.

If the present Foster bill be so changed as to embody the special tax which it is intended to levy on the retail dealer or distributor at retail, in a retail druggist's license, to govern the sale of liquors for medicinal and pharmaceutical use, as well as for the enumerated habit-forming drugs, making the tax $25.00 per annum, then this feature should be highly commended. The proposed tax of $1.00 for the retailer is entirely insufficient to prevent any one from becoming an authorized retail dealer in such drugs, while a tax of $25.00 would more likely accomplish this, and if it included at the same time the right to sell liquors for medicinal and pharmaceutical purposes, it would do away with the need for pharmacists to be classed as retail liquor dealers. If, further, the retail dealer would be exempted from the requirement to keep books, render returns and to give bond, and if finally the foreign manufacturer of salts and derivatives from the drugs are not given an advantage over domestic manufacturers, then the Foster bill, so changed, should find the general approval of the pharmacists of this country.

THE OWEN BILL FOR A DEPARTMENT OF HEALTH.

Possibly no single proposed legislative measure has attracted a wider attention in medicine and pharmacy than has the bill of Senator Owen to establish a National Department of Health. Not alone in Medicine and Pharmacy has commendation or criticism been plentiful and bitter, but to an almost equal degree, the people as a whole are interested. Many, well known for their interest in the cause of Pharmacy, at first assumed an uncompromising position against such legislation, and by means of prejudice and otherwise a great portion of the laity were ar-

rayed against it. Within the last six or eight months a change in this respect is to be noted, which leaves the strongest opposition to the establishment of such a department, against cabinet officer to be at its head, and to the wide and far-reaching scope of authority which the Owen bill would give.

It does not seem possible to make a well-grounded objection against combining all of the various activities of the national government concerning the public health, and to placing them in one department. It must be apparent to even the unthinking, that with proper limitations such a change would work immeasurable good. It is difficult, also, to find a well-grounded objection toward making the head of such a Health Department, an executive officer in the Cabinet of the President. Surely, the health of our people is quite as important as is any other department now so represented. The real objection as made up to the present time, must be found in the danger of unlimited and uncontrolled authority, and it would seem that this should not be impossible to overcome. The Owen Bill as now pending in Congress provides for a director of health, and for an assistant, who shall be known as the Commissioner of Health; it provides further for eight bureaus to take care of the various activities, and provides finally for an Advisory Board at the discretion of the Director of Health. From a pharmacist's viewpoint the objection to the present bill should be that a joint Bureau of Foods and Drugs is provided for, when there should be separate bureaus, since pharmacy and drugs are quite important enough to be given over to a separate bureau. There should also be a Bureau of Chemistry, and all of the various bureaus should be each in charge of a supervising officer, especially fitted. The proposed Advisory Board should not be and should not rest in the discretion of the Director of Health, but should be a fixed part of the new department. Such Advisory Board should be appointed by the President, and its membership should include at least one physician, one chemist, and one pharmacist. All important matters pertaining particularly to innovations, should be decided upon by said Advisory Board, and said Board should be open for the appeal of any individual or set of individuals, and in every case the decision reached by such Advisory Board should govern and control the administrative course of the Director of Health, and his department. It is entirely out of the question to here enter into a discussion of all of the different features of the Owen Bill, but with proper representation for Pharmacy and with safeguards provided by the institution of an Advisory Board with final authority, so that autocratic and inconsiderate exercise of authority is safeguarded against, there does not appear to the writer any further vital objection from the pharmacist's viewpoint.

RICHARDSON AMENDMENT TO THE FOOD AND DRUGS ACT.

The decision of the Supreme Court in the Johnson Cancer Cure case almost immediately resulted in a special message from President Taft, pointing out the need for an amendment to the Food and Drugs Act. In keeping with this message, Congressman Richardson introduced a bill, known as H. R. No. 12,315. A single reading of this bill makes it evident that Congressman Richardson proposes to go far beyond the legislation recomended by President Taft. Three separate amendments are provided for in the bill, the first of which as an Amendment to Section 6, includes a further definition of the term "Drugs," and of the

term "Food," and may be regarded as comparatively unimportant. The other two are proposed Amendments to Section 8, and the second of these seems fully and completely to meet the needs which have arisen since the decision of the Supreme Court in the Johnson Cancer Cure case, and for that purpose should find no objection. However, the first proposed Amendment to Section 8 is extremely far-reaching, and would have a decided influence on the so-called "Patent Medicine Business." In fact it would have a tendency to leave little or no business for the Patent Medicine Man. The section seems loosely drawn, and it is difficult to decide upon its exact meaning, but it would seem to provide for the following, as a "misbranding" within the meaning of the Act.

First. In the case of preparations represented to have curative properties, if the compounder or vendor is not authorized under the law of the state or community, where the article is offered for sale, to practice medicine or pharmacy.

Second. If labels, advertisements, posters, circulars, etc., contain a description of symptoms of diseases.

Third. A drug offered for sale to the laity, directly or indirectly, which contains acetanilide, antipyrine or some fifty other drugs or their compounds, preparations or derivatives. A further requirement in this respect that the label shall bear the name of such drugs does not make it entirely clear whether the author intends that all drugs or preparations containing the enumerated articles shall be misbranded, just because they contain them, or whether they shall be considered misbranded if they contain them and do not bear the names on the label.

Now as with regard to the first provision, it must be kept in mind that it applies to Inter-state Commerce alone, and as it reads at the present time it would be necessary for a compounder or vendor of a preparation represented as having curative properties residing in Massachusetts, to be either authorized to practice medicine or pharmacy in New York before he might be permitted to offer said preparation for sale in New York. Of course, this may not be intended, but it is the plain interpretation of the proposed amendment, and even if it should mean that the compounder or vendor must be authorized to practice medicine or pharmacy in his home state, it is a serious question to contemplate the far-reaching effect of such a provision. It must be kept in mind that none of the preparations now put on the market by co-operative drug houses, and none of the non-secrets as are sold by retail druggists, are to any large extent compounded by authorized practitioners of medicine or pharmacy. They may be prepared under the supervision of an authorized pharmacist in the state of manufacture, but would this meet the requirement of this proposed amendment? Then again it is a question whether the time is ripe in this country for an endeavor to do entirely away with the Patent Medicine business. Purely from a business point of view, it must be considered that for a large part of the retail druggists in this country, the sale of patent medicines constitutes a profitable source of income, which it is doubtful of supplanting by something else equally or more profitable, so long as an army of dispensing physicians exists everywhere, and so long as these can go unhindered. It is quite likely that the patent medicine using public would turn in the direction of the dispensing doctor. It is a question also whether Congress

has the constitutional right to limit the compounding of curative preparations to authorized physicians and pharmacists.

As with regard to the second provision which would prevent a description of disease symptoms, it must be admitted that this is a desirable provision, but as it reads at present, it is without limitation, and some one in the exercise of authority, might under it prevent even the most harmless statements.

As with regard to the third proposed feature of the first Amendment to Section 8, it is of course likely that the author meant merely to require preparations containing the named drugs to be so labeled, and if this be the intention, then with proper change carrying such intention into effect, there is possibly no well grounded cause for objection.

While considering generally amendments to the present Food and Drugs Act, it is a question also as to whether the deviation from the standard of the Pharmacopœia and of the National Formulary, as now permitted under the Federal Act, should not find attention. Such permitted deviation has been strongly and very generally criticised, and the claim is made that it caused an injury to the legitimate pharmacist. No doubt those who favor such deviation have strong and plausible reasons for doing so, but since amendments are contemplated it would no doubt be well to express the views of this Association at this time.

In closing, I trust that I may once more be permitted to point out the urgent need for having a thorough understanding on the proposed National Legislation, and a working in harmony such as will enforce a proper respect for the wishes of the pharmacists of this country by the law-making body.

STATE PHAMACEUTICAL ASSOCIATION PROCEEDINGS.

H. M. WHELPLEY, M. D., PH. G.

The volume of proceedings of the annual meeting of a state pharmaceutical association preserves in permanent and convenient form the official records of the convention. It is not necessary nor is it always advisable to have the minutes complete, but what is recorded should be accurate. The volume should be of immediate interest to all of the members of the association, of general interest to editors of pharmaceutical periodicals, to state association officers, board members and others who are expected to keep in touch with the topics of the times during the convention season. The book deserves a place on the shelf of reference books in both college and drug-store libraries. A collection of complete sets from all of the states would prove of great historic value as well as of service in everyday literary work by pharmaceutical writers. As far as I know, the Lloyd Library has the only complete collection of state association proceedings. I now come to the consideration of a debatable purpose of the published volume of state pharmaceutical association proceedings. I say debatable because few associations seem to consider the annual report to be a source of news and demand its early publication. At one time, the pharmaceutical press gave full and prompt accounts of all the state meetings but at the present time with forty-four such organizations and at least one-half of them holding the annual convention in June, it is no

longer possible for drug journals to do the subject justice. I have for several years felt that the members are entitled to the annual report within a month of the close of the meeting. This year, I mailed the proceedings of the Missouri Pharmaceutical Association two weeks from the day the convention closed. I have been asked by several secretaries to explain how this was done and these questions are my excuse for presenting my views on this subject.

Stenographer. First of all, we must have a stenographer who is competent to take down the discussions and readily read the notes. Do not give the work to some one who is anxious to have the practice. I have had but three stenographers during nineteen years. I coach my stenographer before the first meeting he reports so that he knows the general style to be followed in preparing copy. He typewrites his notes each day and usually hands me the complete manuscript the day following the close of the meeting.

I edit the copy at once while the convention work is fresh in my mind. I prepare each page and call on the printer with all of the copy in consecutive order ready for the compositor.

Printer. I secure bids for the work at a flat rate of so much per page including the use of cuts and printing of inserts. The proportion of ten, eight and six point type is indicated in the copy; no extra charge is made for authors' corrections. I leave it to the printer to designate in his bid how soon the bound volume can be delivered. I have the envelopes printed and addressed while the volume is in press and mail the reports the day they come from the bindery. In other words, I get out the proceedings as an editor does a journal, on schedule time.

Size of Page. It is to be regretted that the secretaries of the different state associations have not adopted a standard size for the volumes of proceedings. I use 70-pound super calendar (S. & S. C.) paper 25″x38″, which cuts to an advantage and trims, 6x9 inches. I consider this to be about the right size but am ready to adopt any size that the majority of the associations consider the most suitable.

The Cover. A few associations bind the report in cloth. I have never considered this to be worth the additional expense. Such covers must be removed when the reports are bound in a single volume. We should encourage the members to bind the reports every three or five years.

Index. This is the key to the situation and should be ample as well as correct.

Inserts. Full page pictures should be printed as inserts, faced with tissue paper. I print a picture of the retiring president and such other pictures as are convenient. These usually include some of the ex-officers, the life members who are present, the officers for the ensuing year, the board of pharmacy members, etc. Large groups do not reproduce to an advantage. It is better to devote the space to smaller groups which enables the members to recognize each person.

The Board of Pharmacy. In states where the board of pharmacy issues an annual report as a separate volume, it is not necessary to give much space to the board. In states where the board does not print an annual volume the state association report should contain the state pharmacy law and all the rules and regulations of the board of pharmacy.

Fraternal Relations. Each of the following associations should be accorded a full page: The American Pharmaceutical Association, National Association

Retail Druggists, American Conference Pharmaceutical Faculties, National Association of Boards of Pharmacy.

Organization. It is well to publish each year the list of those who attended the organization meeting and accompany the same with a few words about the first meeting.

Minor Points. Many things will occur to the secretary who studies to make the annual report useful and convenient for the members. I might mention the following: Give date of organization and date of incorporation; state the date to which the list of members is corrected; print life members in bold face type and explain the meaning of the same; use a star to indicate each one who was present at the annual meeting; at the end of the list give the total number of members. Of course, the committees, delegates and lists of ex-officers as well as dates and places of past meetings should be given in a prominent place.

I have suggested on previous occasions that the secretaries of the state associations who attend A. Ph. A. meetings meet in a formal manner and discuss subjects of mutual interest. Such conferences would result in secretaries becoming more efficient officers.

NEW SOURCE OF POTASSIUM SALTS.

At present Germany controls practically the world's supply of potassium salts, which are more needed by the farmer than by the druggist, so that the report of a new source of supply of potassium will be welcome to all. Recent work by the field experts of the Department of Agriculture has proven that the United States has an almost inexhaustible supply of potassium in the kelp beds of the Pacific coast, and high yields of this indispensable metal have been obtained by them from what was hitherto considered a nuisance to bathers and fishermen. Kelp, a marine growth, has long been used as one of the sources of iodine until the discovery of the brine wells of western New York, Michigan and other lake states, but only recently have the properties of the vast kelp beds of the California coast been thoroughly investigated. These beds are of enormous extent, some of the plants reaching a growth of a hundred feet in length, and tests have shown that dried kelp will yield from 20 to 25 per cent. of potassium chloride when treated by proper methods, and the byproducts, iodine, etc., may possibly be made to pay the cost of the extraction of the potassium salts. This particular variety of seaweed seems to have a selective power of absorption for potassium salts, rejecting the sodium salts in sea water in preference to the much smaller proportion of potassium salts contained therein, and the potassium so absorbed by the living plant can be very readily extracted in the form of potassium chloride or other salts. In order to prevent the wasteful exploitation of this newly discovered wealth steps are being taken to preserve the present help beds and to provide for future growth and supply.—*American Druggist.*

Section on Practical Pharmacy and Dispensing

Papers Presented at the Fifty-Ninth Convention

A FEW QUESTIONS SUGGESTED BY COMPARISONS OF THE NATIONAL PHARMACOPOEIAS.

OSCAR OLDBERG.

The twenty national pharmacopœias differ greatly in many ways. Among the differences between them are the following, which I mention as illustrations:

The Pharmacopœia of the United States (Ed. IX, or "Eighth Revision") is a book of about 350,000 words, and describes about 1000 drugs, chemicals and preparations.

The Swiss pharmacopœia (Ed. IV) contains 853 articles or titles described in about 192,000 words.

The German pharmacopœia (Ed. IV, soon to be replaced by Ed. V) gives 108,000 words to 627 titles.

The Swedish pharmacopœia (Ed. IX) devotes 105,600 words to 685 titles.

That of Finnland (Ed. IV) gives less than 30,000 words to 439 titles.

The new French Codex of 1908 is a book of a thousand pages from cover to cover and contains about a thousand titles. It is a great improvement upon the previous edition but differs so much in its general construction from the other pharmacopœias that it can not be briefly compared with them.

The examination of the texts with the view to discover the causes of these great differences has taught me some profitable lessons.

The American pharmacopœia (Ed. IX) contains, besides the 513 pages of text numbered in common numerals, 75 pages of introductory matter paged with roman numerals, and an appendix of over 120 pages not including the index.

The practical question might be asked: Cannot the size of our pharmacopœia be materially reduced without disadvantage? Is it desirable to devote as much as ten pages to the "historical introduction"?

The national pharmacopœia of any country is a document so important that a year is not too long a time to devote to the consideration of such general questions as are herein suggested, and to so much of the recommendations of the Brussels Conference as concerns the proposed uniformity in pharmacopœial nomenclature. The conference proposals relate only to "potent remedies," but it is improbable that any pharmacopœia will adopt more than one system of nomenclature.

The writer of this paper believes that a consistent technical pharmacopœial nomenclature is highly desirable. At the same time *it is of the utmost importance that when prescriptions are written for medicinal substances contained in the*

pharmacopoeia such medicines shall be ordered under their principal pharmacopoeial titles according to which they are arranged alphabetically in the body of that book.

So important is this phase of that question that everything within reason should be done to promote a favorable attitude toward the pharmacopœia among the physicians, and we should avoid doing anything that may operate against it.

There are already in our pharmacopœia some titles which have had an unfavorable effect in the direction referred to.

A number of physicians of the highest standing declare that they have not found it difficult to master the long titles recently introduced and that they are pleased with them. Others use them under protest. Still others, of equally high professional standing, say that they are too busy to seriously consider any proposition that they learn and use a new style of prescription writing different from that to which they are accustomed. They will not lay aside their present way of writing until after it shall have been demonstrated that the public welfare, medical science, and the welfare of their patients will be promoted by the change proposed.

There are countries in which the government can introduce mandatory regulations which will be at once obeyed without question; but in America an order to the physicians that they must use one name but not another in writing their prescriptions would meet with derision.

If we have done aught to hinder a more free use of the pharmacopœia by the doctors let us by all means seek to mend the damage by henceforth pursuing an opposite course.

The pharmacopœia and its full and free recognition and use are so important to the American Pharmaceutical Association and to all pharmacists that a special section to be called THE SECTION ON THE PHARMACOPOEIA should be at once created. Such a section is of greater importance than any other and we should have started it earlier. I wish to freely confess my share of responsibility for the strange omission.

The Pharmacopœia should no longer be a side issue of some other Section.

CHOCOLATE CHACHETS.

FRANKLIN M. APPLE, PH. G.

Every pharmacist who has a clientéle of prescribing physicians, undoubtedly has been called upon at times to devise ways and means whereby the physician could administer medicaments in a diplomatic manner, so as to overcome the objections of the patient to the older forms of medication, and at the same time give to the patient the full dose of remedial agents indicated. This trouble is usually encountered in children, who are petted by their parents, making it necessary for the physician to resort to unsuspected forms of medication.

A modern motto reads as follows: "A diplomat is one who conceals a lump of sugar in each lemon he hands out," but in the form of medication to be de-

scribed the above motto should be reversed for the sweetening portion of it is on the outside—in fact constitutes the greater percentage of the finished product.

Having encountered an exceptionally obstinate child, who was in need of a hepatic stimulant, a physician appealed to us for assistance in devising a pleasing form of medicine to meet the case. The first resort was to chocolate marshmellow drops into which the drugs were carefully introduced, taking care to leave no traces of the work done upon the confection, but this did not appeal very greatly to the patient, hence we were compelled to search further for our diplomatic ally. The reward for our experiments and trials was discovered in the form of what are known to the confectionery trade as Ceylon Wafers. These are small discs, flat upon one side, and rounded upon the other side, made of sweetened, flavored chocolate.

The discs were carefully hollowed out into a cachet-like container, into one of which the drugs were carefully placed. Another disc was then coated with heated chocolate syrup or Mucilage of Acacia and placed upon the drug-laden disc, when they were sealed together smoothly—the finished product showing no evidences of the deception to be played upon the unsuspecting objectors to medication for their ills.

These cachets were readily taken by the patients to whom they were administered, with the desired results. Certainly this form of administering drugs will not permit of bulky doses or unpleasant tasting drugs, but from our experience, it offers a method of combating unruly patients, who have a fondness for chocolate sweets.

The neatest products will result if the discs are carefully selected, so that they are of one size, and in warm weather, if rubber finger tips are worn so as not to dim the luster of the exterion of the cachets.

A FEW PRACTICAL HINTS.

LOUIS SCHULZE.

SOL. MAGNESIUM CITRATE.—Having strong faith in sterilization as a preventative of the formation of fungus growths in solutions of chemicals, for somewhat over a year we have prepared this solution by heating the distilled water to the boiling point for about half an hour, then adding the magnesium carbonate and citric acid; after the reaction has ceased, bottle while still hot, add the potassium carbonate and cork securely.

Thus we have been able to obtain a perfectly clear solution which remains so until the lot prepared at one time (usually one dozen) has been dispensed; since using this method we have found our sales of this popular remedy have increased, hence have come to the conclusion that there must be some improvement in the method that makes the final product more acceptable to the trade.

CHALK MIXTURE.—Time being a valuable consideration to the busy pharmacist, some few years ago we conceived the idea of adding to the Compound Chalk Powder an amount of oil of cinnamon equivalent to the amount contained

in sufficient cinnamon water to form a definite quantity of Chalk mixture, and have found this a quick and easy method of preparing the mixture when needed; namely, by weighing sufficient of the Compound Chalk Powder containing the oil and adding thereto the required amount of distilled water.

LIME WATER.—We have had most excellent results in maintaining a strictly U. S. P. article of Lime Water by preparing it from a Calcium Oxide which is marketed in air-tight tubes, each containing sufficient to make one gallon on addition of the required amount of distilled water.

We have found this a rapid and convenient way of preparing this article in a form to meet the official requirements, an important matter in these days of pure food and drug laws.

COLLECTIONS "ON ACCOUNT."

In regard to current accounts with credit customers, it is always well to mail a statement at the beginning of the year. A certain percentage of people straighten out their financial matters at that time, and these people will pay their bills. Another class, dubious pay, make an effort to do better with the advent of a new year, and it is just as well for the druggist to take advantage of the spasm of reform and get something on account.

One druggist says: "When a man gets to owing me more than he can pay me in a lump, I do not mention the amount of the bill, but go after him hammer and tongs for something on account. If I can get him to make a couple of payments on account, I often get the bill reduced to a figure that does not scare him or make him decide to jump me altogether. If I went at him for the full amount, a sum that he could not possibly raise, the chances are that he would get sulky and let the entire bill go by the board."

This is good reasoning, and a number of druggists follow it, going after something on account until they can get the bill reduced to some extent, and then making a strike for the full amount. Suing a man is always a risky business, and it is well to avoid doing this whenever you possibly can. A young, hot-headed merchant often threatens suit, but the older he gets the more willing he is to keep out of a lawsuit. There's nothing in making enemies. You will pick up enough in the ordinary course of business as you go through life.—*National Druggist.*

FAILURE SHOULD NOT DISHEARTEN.

"High ideals, noble efforts will make seeming failures but trifles, they need not dishearten us; they should prove sources of new strength. The rocky way may prove safer than the slippery path of smoothness. Birds cannot fly best with the wind but against it; ships do not progress in calm, when the sails flap idly against the unstrained masts."—*William George Jordan.*

Section on Commercial Interests

Papers Presented at the Fifty-Ninth Convention

THE SHOW WINDOW AS AN ASSET.

B. E. PRITCHARD.

In my home city there is a firm engaged in the business of drug merchandizing in a retail way, but in a rather strikingly wholesale manner. This concern occupies store rooms on seven of the most prominent thoroughfares, and its annual rentals mount into figures that sound somewhat startling to a retail druggist. I have exact knowledge only as to the rental paid for three of these locations, and feel that the other four will measure up proportionately.

These that I quote run, respectively, $12,000, $10,600 $6,000. This firm believes in and practices advertising in a large way. Newspaper space and large, attractively painted sign boards, located at prominent points throughout the city and its environments, it uses constantly. This matter of publicity is rarely used, however, in a manner to cause demoralization. At one time in my official capacity, in company with other officers of our local organization, we interviewed the manager of this concern with reference to securing his co-operation in the maintenance of a fair schedule of prices and reasonable methods in the competition for business, in which it is a pleasure to say we were successful, and thus this strong chain of seven big stores continues to this day to help maintain good conditions and to play fair with the smaller stores, to an extent that is very gratifying, considering the possibilities within the power of such large buying capacity.

While, as has been mentioned, this concern practices the science of advertising in a large way in its campaigning for business, it depends mostly for returns upon the proper use of its show window displays. The firm employs an expert display artist, Mr. Wm. T. Gwyer, who, after the manner of most men who thoroughly know their value in any line of endeavor, is modest, quiet and thoughtful in demeanor. It has been my good fortune to have for some time enjoyed the acquaintance with this man, and to have at times conversed with him concerning his methods, and in this paper it is my purpose to draw largely upon the information obtained during interviews upon the subject here being treated.

Before entering upon this field of information, however, permit me to explain that Mr. Gwyer does not personally do the actual work of trimming his windows, no more than does an architect with his own hands put into material form the structure that he designs.

The windows, as well as the very large number of show cases used in the seven stores that are under his care, are all arranged by a corps of helpers, the

members of which work from designs originated by this artist in his studio, and the sketches for each individual window or case are worked out by his hand with pen, pencil and brush. When the work is completed and approved the designer takes a flash light picture of the display which he carefully dates and notes the nature of the artcle or articles used therein, this information and picture are then filed in a portfolio. While any display is on, a record is kept of results in the matter of sales during its life, which is made a part of the information accompanying the picture. Thus the drawing power of every display ever made and its selling value is accurately known, which forms a most valuable source from which to draw inspiration for future displays.

Mr. Gwyer contends that it is quite as necessary to use the windows, the awnings, and, in short, the outside as well as the inside of the store as it is to use good newspaper copy. Although newspaper space is costly and most of your advertising appropriation must go that way, it does not follow that the best advertising is confined to newspapers, as a matter of fact we consider our window space of even greater value as an advertising medium.

The selling force of a good window trim is often overlooked. Almost any form of advertising will show results, but window advertising is the least expensive and the results are almost immediate. It arrests the attention of the passer by as no other form of advertising can, and it is but a step into the store while the desire to purchase is still fresh in mind. The merchant who wisely uses his windows brings into his store the possible purchaser of a commodity that has been widely advertised in magazines and newspapers, and the window acts as the proper connecting link between newspaper and store.

Some druggists, I know, look upon their windows as a sort of nuisance, and under such a condition the passer by who looks into them is led to agree with that view. Men are usually judged by the clothes they wear; the drug store is, in like manner, sized up by the condition of its show windows.

As a rule window trims should not remain unchanged more than one week. The fewer the windows the oftener the display should be changed. Every trim should have an appropriate show card, or a number of them. Signs should at all times be accompanied with price quotations. A display of any sort of goods in a show window without business-like looking price tickets is like making bread without yeast, it fails to raise the "dough" (this latter quaint remark, parenthetically, shows that our friend Gwyer, like most quiet fellows, has a sense of humor in his make up).

Keeping forever at it, week in week out, applies to window displays just as it does to newspaper advertising. To paraphrase an old maxim, "Eternal advertising is the price of success in modern merchandising."

If a window display does not draw it should be taken out after two days. If it does draw it should be allowed to remain three days. There is nothing like teasing the public, Mr. Gwyer thinks, and it is infinitely better to come again with a successful window than to keep at it until it grows stale.

If a special sale of an article is to be featured in the window Friday is the best day on which to spring it, for reason that it is usually a dull day in almost every community, therefore the best time to make a special bid for business. The policy of putting on display certain goods to be sold at a special price two or

three days later has proven unwise—now is the accepted time—seen today it may be forgotten tomorrow. Failure to appreciate the value of their window, so prevalent among druggists, Mr. Gwyer classifies as almost a crime.

THE DRUG STORE CRISIS.

CHAS. M. FORD, PH. G.

It is not the purpose in this paper to sound the alarm of some new danger that threatens the members of our craft or to announce any newly arrived condition. Rather, to call attention to what is the common knowledge of all the dispensing pharmacists of the country and see if we are doing individually and collectively our full duty in meeting those conditions, which are thrust upon us by a revolution in medical practice.

This revolution is so fixed and widespread that even the general public have observed it and are a part of it, as much as pharmacists and physicians.

This writer, since his retirement from active business about a year ago, has enjoyed a more advantageous viewpoint than is afforded from a position back of the prescription case.

The aforesaid viewpoint was made even more advantageous when, two months ago, the Colorado State Board of Healith created the office of state drug inspector and conferred the same upon this wandering pharmacist.

In the brief period that has elapsed since entering upon the state's pay roll it has not been possible to look in upon all my fellow pharmacists of the city of Denver.

Fifty such official visits have been made to as many different stores and a few facts gathered from each visit are herewith laid before you.

There are, all told, 181 stores in Denver.

The fifty here reported are not all in one section but from different sections of the city, so as not to impair the average.

In the fifty stores, 211 persons are employed, including proprietors actively engaged and help of all kinds. Of these 211 persons, 84 are registered pharmacists. There are 307 new prescriptions dispensed daily.

We have one firm operating several stores in the center of the city, who dispense about 200 prescriptions daily. This firm should obviously be excluded from any calculations to show average conditions.

The 307 prescriptions now dispensed at fifty stores could easily be dispensed at ten stores without any of the remaining forty stores suffering any material loss. In fact the apparent sacrifice might, to each of them be a gain, if an effort were made to secure business from other undeveloped sources.

For instance, assuming that about 250 families are tributary to each store and the wants of these families in such articles strictly appropriate for druggists to handle were carefully considered the drug store might become a much more useful institution in the community than the present so-called prescription pharmacy, which is such only in name and disappointed hopes.

With the prescription features eliminated, there could be made a reduction in cost of help and possibly hours. Suppository moulds, tablet machine, capsule fillers, microscope and chemical apparatus, such as belong to a real pharmacy would no longer be required. The unsightly prescription case, which still clings to so many stores could be relegated to deserved oblivion and its ancient and senseless secrets laid bare.

It never had any legitimate use, except to conceal loafers and faulty store-keeping. Another good riddance would be that large class of merchandise in pint bottles, that never served but two purposes, one to remind us of our friend, the detail man; the other to fill a four-ounce prescription once.

The business day of sixteen or seventeen hours might be shortened. It is true that prescription dispensing is not the only work about a drug store requiring skill, for as we all know the services of the trained and experienced pharmacist are just as essential in supplying the household remedies and giving the necessary information and advice regarding them.

Therefore if an attempt should be made to classify stores into those doing prescription work and those refusing it, the same regulation and restriction would be required in both classes.

It is hopeless to look for a return to prescription writing by physicians. It is in fact becoming a lost art and we must adapt ourselves to the inevitable.

Modern surgery, osteopathy, electropathy, Christian Science and hygienic treatment have all laid a heavy hand upon the pharmacist's calling.

In the meantime let us keep our eye on the two great foes to ethics in pharmacy, as well as in medicine, the detail man and the dispensing doctor.

Let us join hands anew with the American Medical Association for an open Pharmacopoeia and National Formulary in every pharmacy, in every physician's office and in every college of medicine.

THE DEATH BENEFIT IDEA.

Wilhelm Bodemann of Chicago is very much interested in the idea of establishing a coöperative death benefit plan among pharmacists. He has sent us two or three letters on the subject which have appeared in the Bulletin from time to time, and other druggists have responded with approval. We gave space last month, for instance, to a communication from John C. Endress. It strikes us that the idea is worth developing. The plan would be simply for each member to be assessed 50 cents or $1.00, say, whenever there was a death, and the amount so collected would be sent to the widow to help defray the funeral and other expenses. Oftentimes the best of men die without leaving very much in the way of money, and four or five hundred dollars, or even less than that, becomes almost a godsend. If a thousand men would go into the scheme, and the assessment were modestly set at 50 cents, this would make $500—a very tidy sum in cases of emergency. The logical organization to push this thing is the N. A. R. D., and we commend the proposition to Major-General Charles Mylert Carr, soldier, propagandist, and penman-in-chief of the organization.—*Bulletin of Pharmacy.*

Reports of A. Ph. A. Committees

THE PROGRESS OF PHARMACY.

Abstracts from the Report on the Progress of Pharmacy for the Year 1911, by C. Lewis Diehl, Reporter.

(Second Installment.)

Acetic Ether: Rational Method of Preparation.—According to A. Kurtenaker and H. Habermann acetic ether is most rationally prepared from molecular proportions of alcohol and acetic acid, using nickel sulphate as a dehydrating medium. While an excess of alcohol causes the esterification of a larger percentage of the acetic acid, the resulting acetic ether is contaminated with considerable quantities of alcohol which can be removed only by a tedious process. They recommend that the reacting mixture be heated in a water bath, under a reflux condenser, and as soon as the thermometer indicates a boiling point of about 73°, to reverse the condenser and collect the distillate so long as the boiling point does not rise materially above 73°. When this occurs, the mixture is again heated under the reflux condenser until the contents of the still again boil at 73°, when the distillate is collected as before—this alternate systematic treatment being repeated until no further distillate passes over at the temperature of 73°. This method secures the largest yield of pure acetic ether.—Jour. f. prakt. Chem., 1911, No. 12.

Camphor: Tests of Identity and Purity.—W. Lenz has made some comprehensive studies regarding the tests of identity and purity of camphor. He finds that the determination of the melting point affords an excellent criterion and aid to establish the purity of a sample. The optical rotation, however, gives no reliable data for the valuation of crude camphor, the impurities of which show a stronger rotatory power than pure camphor; it is of value, however, to determine whether or not the sample consists of natural d-camphor. While the determination of the residue of evaporation is a valuable aid to establish the purity of camphor, this is too tedious and consequently impracticable. The conversion into oxim has been improved by the author so that a yield of about 93% instead of from 75 to 85% is obtainable; but a valuation of the sample is impracticable because of the disparity between the theoretical and actual yield of oxim is still too great. The vanillin-hydrochloric reaction is of service only for the identification of natural camphor; moreover, the red color of this reaction is exceeded by that produced by pure hydrochloric acid (38% HCl) on natural camphor. But the amount of substance insoluble in 10 parts of this strong hydrochloric acid affords an excellent criterion for estimating the impurities in commercial camphor, which may serve well as a basis for a reliable process. In point of fact, however, it may be said that no single reaction will serve to give a clear view of the composition of crude camphor, which becomes possible only by a combination of the various tests and reactions proposed.—Arch. d. Pharm., 249 (1911), No. 4, 286-298.

Synthetic Camphor: Continued Improvement in German Manufacture.—Gehe & Co. report that while in other countries some of the manufacturers of Synthetic Camphor have relinquished their efforts to compete with the natural product, owing to the continued high price of oil of turpentine and the reduction in the price of Japanese Camphor, the restless energy of German manufacturers in improving and devising new methods has enabled them to compete successfully and to maintain the position of synthetic camphor on the market. The outlook for a continuation of the manufacture of syntnetic camphor is the more encouraging, since it has been clearly proven that the artificial product possesses identically the same therapeutic properties and practically the same chemical character as the natural.—Pharm. Ztg., LVI (1911), No. 32, 321.

Barium, Strontium and Calcium: Quantitative Separation and Estimation.—v. d. Horn

and v. d. Bos describe a new method for the quantitative separation of barium, strontium and calcium, which is adaptable both for their gravimetric and volumetric estimation in their admixtures. The dilute solution is acidulated with acetic acid and the barium precipitated with excess of ammonium chromate, the barium chromate being collected on a filter, washed, dried and weighed. From the filtrate the strontium chromate is precipitated quantitatively by 50% alcohol, and in the filtrate from this the calcium is quantitatively precipitated as oxalate. The details of the volumetric method, based upon the reactions described, must be consulted in the original abstract.—Pharm. Weekbl., 1911, 5, through Pharm. Zentralh., LII (1911), No. 30, 298.

Mercury: Colorimetric Estimation in Very Dilute Solutions.—H. R. Procter and R. A. Seymour-Jones recommends a colorimetric method for the estimation of mercury in very dilute solution which is based upon the observations that the metal is not precipitable as sulphide with H_2S in the presence of formic-, citric- or other organic acid, the HgS being retained in colloidal solution. The intensity of the color produced is in direct proportion to the amount of metal present, which may then be estimated by comparison with a standardized solution of the same by one of the known colorimetric methods.—Journ. Soc. Chem. Industr., through Chem. Ztg., 1911, No. 90.

Nitrates: Detection in Portable Waters.—Caron and Raquet recommend a solution of salicylic acid in concentrated sulphuric acid as a valuable reagent for nitrates in drinking waters. Ten Cc. of the water are evaporated to dryness, the residue is triturated with 1 Cc. of the reagent, and 10 Cc. of water, followed by 10 Cc. ammonia are added. In the presence of nitrates a yellow color is developed, which may be made available for their colorimetric estimation. It is essential that the reagent is freshly prepared, but this can be avoided by adding 1 Cc. of a 1% solution of sodium salicylate to the evaporating water under examination, and then adding simply concentrated sulphuric acid, followed as before mentioned with water and ammonia.—Rép. de Pharm., 1911, No. 6.

Nitrites: New Reagent for Their Detection in Potable Waters.—Dané proposes as reagent for nitrous acid in potable waters a solution of 0.02 of synthetic indol in 150.0 of 95% alcohol. If 2 to 5 Cc. of this new reagent are added to waters containing nitrites, and the water is then acidulated with a 50% sulphuric acid, a rose-red color is developed in the course of one minute. The reaction is quite sensitive; it may be made available for colorimetric determinations of nitrites in waters, and serves also for the detection of nitrous acid in other reagents.—Bull. de. la. Soc. Chim., IX (1911), 345.

Colatein (Kolatein): A New Constituent of Kola-Nuts.—A. Goris describes a new, phenol-like constituent of fresh kola-nuts, which he obtained during the isolation of kolatin with which it occurs associated and is separated by its insolubility in ether, in which kolatin is soluble. By several recrystallizations the new body, which the author has named *Kolatein,* was obtained in a pure condition, leaving no residue on combustion. It does not liberate carbonic acid from $KHCO_3$, is precipitated from its solutions by lead acetate, gives a green color with ferric chloride and its solution becomes violet-red on addition of ammonia. Kolatein is soluble in hot water, more sparingly in cold water; also soluble in alcohol, acetone and wood-spirit but insoluble in ether, choloroform, petroleum ether and xylol. From its aqueous solution it crystallizes with water of crystallization, which, however, it loses rapidly on drying, and in this respect resembles phloroglucin with which it has various reactions in common. It differs, however, from phloroglucin by its bitter taste, its coloration (green) with ferric chloride, and its melting point, which is 257°-258°. In its chemical relations it apparently belongs to the group of catechins.—Bull. des. Science. de Pharmacol, 1911, No. 3.

Opium: Culture-Experiments in Austria.—Dr. W. Mitlacher and R. Wasicky give some interesting information concerning culture experiments undertaken in Austria during recent years with the object of cheapening the method of collecting the opium from the poppy. It has been demonstrated by numerous experiments recorded during the past century that the poppy (*Papaver somniferum,* L.) cultivated throughout Central Europe, will yield by the Oriental method of collection (by incisions in the unripe capsules) opium differing very little or not at all from Smyrna opium of normal quality in its alkaloidal con-

tent. The cultivation of the poppy for the production of opium has, however, been prohibitive on account of the high cost of the labor required for collecting the poppy juice by incisions on the capsules of the growing plant. The authors therefore conceived that a method of expression might lead to the economical production of the opium of satisfactory quality; but in this they were disappointed. Opium obtained in this way was extremely deficient in alkaloid, containing only about 5% of the quantity of morphine found in opium prepared from the same crop by the Oriental method; nor was it possible to obtain more than 20% of the morphine content of the latter, by repeated extraction of the marc remaining after the expression of the juice. Nevertheless, the authors believe that by improving the method of expression, using a press of greater power, possibly in connection with an inflow of warm water, it may be practicable to prepare an opium with a profitable content of alkaloid, though admitting that at present the proposed method has no practical value.—Unt. d. Allg. Oesterr. Apoth.-Ver., 1911, No. 5.

Rhamnus Cathartica: *Constituents of the Bark.*—Introducing the subject of their recent researches on the constituents of the bark of *Rhamnus Cathartica*, A. Tschirch and H. Bromberger mention that more than 60 years ago Max Boriswanger had determined the presence in this bark of the following constituents: An oil (colored green by chlorophyll) rhamnoxanthin, amorphous resin; tannin, crystallizable bitter principle, and sugar; but none of these bodies were definitely characterized Since then (1898), Tschirch announced the presence of "Oxymethylanthraquinone" in this bark (compare also Rhamnus Catharticus," Proceedings, 1901, 741). By their recent researches Tschirch and Bromberger have now isolated and definitely describe the following additional constituents: *"Rhamnosterin,"* a nearly colorless body belonging to the phytosterins; *"Rhamnofluorin,"* an ash-gray body, crystallizing in flat plates, soluble in ammonia and alcohol with green-yellow fluorescence; *"Emodin"* (=Frangula-Emodin); *"Chrysophanol"* (=pure Chrysophanic acid); *"S-Glucose"*; and *"Tannic Acid."* Arch. d. Pharm., 249 (1911), No. 3, 218-223.

Gentian Root: *Changes During the Vegetation Period.*—M. Bridel makes some interesting observations concerning the changes in chemical constituents of Gentian Root during the vegetation period of one year. He finds that considerable variations occur during the period, particularly in the direction of the carbohydrate hydrolysable by inversion. In the case of gentiopicrin these variations are not appreciable, the roots containing constantly at least 2% of this glucoside. The quantity of carbohydrates hydrolysable by inversion, however, which at the beginning of the vegetation period amounts to 1.2% was found at the end to be 7.8%. Gentianose is always present in the amount of ⅓%, except during the months of May and June, at which period the root contains gentiobiose, and that the content of gentianose is greatest during the months of August and September The greatest variations, in fact, is shown in the saccharose content, which accumulates towards the end of the vegetation period and disappears completely at the beginning of the next, as does also a large portion of the gentianose—Journ. de Pharm. et Chim., 1911, No. 6.

Tincture of Gentian: *Improved Preparation.*—In the course of his studies on the constituents of Gentian Root and the changes occurring during the process of drying and preservation (see *Gentian Roots*, above), Bridel has determined that the active constituents of the fresh roots may be preserved without appreciable loss if a rational process of drying is observed. In a further communication the author now points out that the ferment existing in fresh Gentian Root, being practically unchanged in the properly dried drug, it is liable to exert unfavorable activity on the gentiopicrin if the gentian is prepared in the ordinary way, and that this ferment should therefore be destroyed by preparing the tincture with *hot* alcohol. A properly prepared tincture of gentian should contain about 1% of gentiopicrin.—Pharm. Ztg., LVI (1911), No. 54, 544.

Cherry-Laurel Water: *Preservation, Clarification, etc.*—A. Astom points out that cherry-laurel water can be effectually preserved only by keeping it in completely filled, well-closed bottles, protected from light. The loss in hydrocyanic acid in open bottles, particularly when they are not filled, is very considerable, and this loss is greatly increased by the influence of light. The author advises the use of small brown-glass bottles for

storing this water and also for dispensing it. Moreover it must be tested from time to time regarding its strength, and should be renewed more frequently than is at present required by the French Pharmacopœia, which directs the renewal of distilled waters annually. Regarding the clarification of cherry-laurel water, the author cautions against the use of animal charcoal, which is capable of absorbing and holding considerable quantities of HCN. This absorption varies with different kinds of charcoal and the quantity, but time of exposure or the temperature appears to be of comparatively small influence. —Jour. de. Pharm. et Chim., Vol. IV (1911), No. 1.

Extracts of Belladonna and Hyoscyamus: New Method of Alkaloidal Assay.—A new and simple method for the estimation of alkaloid in the extracts of belladonna and hyoscyamus has been adopted in the laboratory of the Association "Pharmakon" of St. Petersburg, which may be briefly outlined as follows: The extract (using twice as much extr. hyoscyam as belladon.) is liquified with water and, after addition of ammonia, vigorously shaken with a measured quantity of ether. After subsidence, an aliquot part of the ethereal extraction is evaporated, the residue is dissolved in alcohol, the solution diluted with water, and a specified quantity of 1/10 N-hydrochloric acid added, the whole being adjusted with water to a specified volume. An aliquot quantity of liquid is then filtered off, a measured quantity of ether is added, and the unconsumed hydrochloric acid is then ascertained by titration with 1/10 N-potassium hydroxide, using iodeosin as indicator, to a faint rose color. The reaction is quite sharp, and the calculation is made in the well-known manner.—Farmaz. Journ. russ, 1911, 138.

Syrup of Raspberry: Detection of Foreign Coloring Matter.—Schwikkard points out that the G. P. method of testing for foreign coloring matters in syrup of raspberry, which depends on their solubility in amyl alcohol, is liable to be misleading because the latter acquires a strong rose color with all natural raspberry juices. He therefore recommends the destruction of the natural color by treatment with sodium hydroxide solution before applying the amylalcohol test.—Pharm. Ztg., LVI (1911), No. 57, 578.

Ferrated Cod Liver Oil: Preparation with Ferric Benzoate.—Const. Kollo points out that the solubility of ferric benzoate in cod liver oil depends on the method of its preparation and the care with which it has been preserved, and therefore considers it best that pharmacists prepare this salt themselves to assure its proper quality, for which purpose he recommends the following formula: 6 Gm. of pulverized benzoic acid are suspended in 120 Gm. of distilled water and accurately neutralized with 10% ammonia, of which about 8.5 Gm. are required. The filtered solution is transferred into a wide and deep porcelain basin, and a solution of 9.5 Gm. of solution of ferric chloride of sp. gr. 1.280-1.282, previously diluted with 250 Gm. of distilled water and neutralized with ammonia as accurately as possible, is added with assiduous stirring. The voluminous precipitate is allowed to subside, washed until the washings no longer give a chlorine reaction, drained, and rapidly dried.—Pharm. Post, 1911, No. 51.

Ung. Hydrarg. Oxyd. Flav: Preparation.—M. J. Romeyer states that the following method yields a yellow oxide of mercury ointment satisfactorily conforming to all requirements: Using a porcelain mortar and porcelain or glass pestle, all these carefully cleansed with hydrochloric acid and distilled water and well dried, 5.0 Hydrarg. Oxydat. flav. and 15.0 Lanolin Anhydric. are intimately triturated with the aid of the heat of a water-bath. The reddening of the mercuric oxide under the influence of the heating disappears completely on cooling. This mixture is finally incorporated with 80.0 Vaselin. alb., 10.0 or more of which may be replaced in winter by Ol. Vaselin. pur. The product possesses permanent stability and is free from all side-effects.—L.Union Pharm., 1911, No. 50.

Propolis: Production, Character, Composition, Etc.—M. Kistenmacher contributes an interesting and comprehensive study of propolis (bee-bread) which, almost completely forgotten as a remedy, has in recent years again attracted attention. He describes its significance in the hive, the method of its production by the bees from the oil or balsam on the surface of pollen grains, its influence on the construction of the honey-comb, its properties, composition, etc. In the fresh condition, propolis is a very soft mass, possessing strong adhesive power, a strongly aromatic odor, a bitter taste, and varies in

color from greenish-yellow to liver-brown. The older bee-bread, containing waxy and refuse matters, etc., usually has a darker color and is less adhesive. The propolis or bee-bread of commerce contains comparatively only a small percentage of solid matter, its composition depending upon the work of the bees themselves as well as the method of the collection by the bee-keeper. It is mainly composed of an oil or balsam—the so-called propolis balsam—which in turn is composed of cinnamic alcohol, cinnamic acid, tannins and resins.—Ber. d. D. Pharm. Ges., 1911, No. 1.

Yoghurt: Preparation.—Dr. H. Kühl contributes a lengthy paper describing the properties and preparation of the Bulgarian milk-food known as "Yoghurt" (also "jaurt") which is receiving considerable attention in recent years and was described in the "Report" of last year (see Proc. 1910, 390). The author does not add much to the description there given, but gives some practical details respecting its preparation which may be of supplementary interest. He says that of the three Bacilli that are concerned in the production of yoghurt from milk, the one of most importance is *Bacillus Bulgaricus,* since it is principally concerned in the peculiar acidification that characterizes this preparation, the other two (*Bacterium lactic acidi* Güntheri and a lactic acid *Streptococcus*) serving mainly the purpose of modifying the taste and preparing the milk for acidification. To prepare the thin-liquid yoghurt, which is preferred to the thick yoghurt used in the Balkan states, good, fresh milk is subjected to brief boiling and then allowed to cool to 45°C., whereupon it is at once inoculated with some old yoghurt or, if this is not available, with a yoghurt culture, which must be well mixed with the milk. It is then allowed to stand at a temperature of about 40°C., observing that the temperature does not fall below 35°C., at which temperature the growth of the *Bacillus Bulgaricus* ceases.

When the milk shows signs of thickening —usually after three to five hours—the vessel is transferred to a cool place, and the yoghurt is then ready for use, retaining its good quality and taste several days. To assure its proper quality an experiment is made with a fresh portion of milk, inoculated with some of the yoghurt just prepared.—Pharm. Ztg. LVI (1911), No. 45, 454; from Südd. Apoth. Ztg., 1911, No. 43.

REPORT OF THE COMMITTEE ON UNOFFICIAL STANDARDS.

The following portion of the report of the Committee on Unofficial Standards relates to certain crude drugs and chemicals suggested for inclusion in the next revision of the National Formulary, and by order of the Council is published in the JOURNAL in order to afford opportunity for discussion before the standards proposed are finally adopted.

Manufacturers, importers, analysts, and others interested in any of the proposed standards, are requested to send their criticisms and comments to the chairman of the committee, Geo. M. Beringer, 501 Federal St., Camden, N. J.

APPROVED MONOGRAPHS SUBMITTED AS STANDARDS FOR UNOFFICIAL DRUGS AND CHEMICAL PRODUCTS.

(Continued from January issue—page 73.)

CANELLA ALBA.

CANELLA.

The dried bark of *Canella Winterana* (L) Gaertn. (Fam. *Canellaceae*).

In quills usually from 1 to 3 dm. long and 1 to 4 cm. thick, occasionally 2 or 3 times as large or in irregular fragments of such quills, the bark from 1.5 to 4 or 5 mm. thick, the outer periderm mostly removed; outer surface light brownish-yellow or pale orange-brown, more or less scaly, with few very shallow fissures, often more or less reticulate with slight ridges; inner surface paler, smoothish, but showing coarse, longitudinal striae; fracture short and sharp, pale yellow, with an irregular slightly darker band just

inside of the middle. Odor slight unless the bark is heated, then aromatic; taste aromatic and peppery-biting, somewhat bitter.

Upon incineration Canella should yield not over 8 per cent of ash.

CASCARILLA.

CASCARILLA.

Sweetwood Bark. Sweet Bark.

The dried bark of *Croton Eluteria* (Linné) Bennett (Fam. *Euphorbiaceae*).

In quills or curved pieces from 0.5 to 2.5 mm. thick, having a gray somewhat fissured, easily detached corky layer, more or less coated with a white lichen, the uncoated surface dull-brown and the inner surface smooth; fracture short, the fractured surface having a resinous and radially striated appearance.

Odor characteristic, being strong and musk-like when the bark is burned. Taste warm, aromatic and very bitter.

Upon incineration Cascarilla should yield not over 10 per cent of ash.

CAULOPHYLLUM.

CAULOPHYLLUM.

Blue Cohosh, Blueberry Root, Papoose Root, Squaw Root, Blue Ginseng.

The dried rhizome and roots of *Caulophyllum thalictroides* (L.) Michaux (Fam. *Berberidaceae*).

From 7 to 15 cm. long and 5 to 15 mm. thick; of horizontal growth much branched, the rhizome slightly compressed from above, bearing large cup-shaped stem scars on the upper surface, and underneath a tangled or matted mass of long, curly, thin, tough roots which frequently conceal the rhizome, both rhizome and roots of a grayish or yellowish-gray color; fracture tough and woody; odorless but sternutatory, the taste bitter, sweet and acrid.

Upon incineration Caulophyllum should yield not over 6 per cent ash.

SEMEN APII.

CELERY SEED.

The ripe fruit of *Apium graveolens* Linné (Fam. *Umbelliferae*).

Consisting of two mericarps, which may be united or separate. Mericarp ovoid, slightly curved, 1 to 2 mm. long, rather more than half as broad and about half as thick, of a rather deep brown color; the inner surface flat, the outer convex, smooth except for 5 very slender light colored ribs, two of which are marginal. Oil tubes in the pericarp about 12, one to three in each interval between the ribs. Odor characteristic, agreeable, taste aromatic, warm and somewhat pungent.

Upon incineration Celery Seed should yield not more than 8 per cent of ash.

CENTAURIUM.

CENTAURY.

The dried flowering herb of *Erythraea Centaurium* (L.) Pers. (Fam. *Gentianaceae*).

Glabrous, 1.5 to 5 dm. high, at length much branched from the base, little if at all branched from above, the stems slender, sharply angled or narrowly winged, sparsely leafy; leaves opposite, entire, mostly 3 nerved, sessile, those at the base obovate and obtuse, 2 to 5 cm. long, the base narrow and petiole-like, the upper gradually changing to oval, then ovate, or even lance-linear, acute or acutish; flowers in a (mostly dense) terminal and at length compound cyme, rose-colored; calyx about 5 to 7 mm. long, deeply 5 parted, the short tube sharply angled, the linear-attenuate lobes with a sharp midrib; corolla-tube nearly twice the length of the calyx, slender, the limb 10 to 15 mm. broad, its lobes broadly oblong or oval; stamens 5, exserted, bright-yellow, their anthers twisted when old; pistil 2 carpelled. Odor faint but characteristic and taste persistently bitter.

Upon incineration Centaury should yield not over 5 per cent of ash.

CETRARIA.

CETRARIA.

Iceland Moss.

The dried thallus of *Cetraria Islandica* (Linné) Ascharius (Fam. *Parmeliaceae*).

Foliaceous 5 to 10 cm. long, often of equal or even greater breadth, irregularly branched into narrow fringed and channelled lobes; brownish above, underneath whitish and marked with depressed silvery spots; brittle and odorless, but when moistened with water becoming soft and cartilaginous and developing a slight odor; taste bitter and mucilaginous.

Before use Cetraria should be freed from pine needles, other lichens or other foreign matters, which are often found mxed with it.

A 5 per cent decoction should gelatinize on cooling.

Upon incineration Cetraria should yield not more than 1.5 per cent of ash.

PIX LITHANTHRACIS.

Coal Tar. Pix Carbonis.

The tar obtained as a by-product in the destructive distillation of coal in the manufacture of illuminating gas.

A nearly black, thick liquid or semi-solid, heavier than water and possessing a characteristic naphthalene-like odor and a sharp burning taste.

It is only slightly soluble in water, to which it imparts its characteristic odor and taste and a faint alkaline reaction. It is but partially dissolved by alcohol, acetone, methyl alcohol or petroleum benzin; almost entirely by ether; entirely by benzol, carbon disulphide or chloroform.

COCCULUS INDICUS.

Fructus Cocculi. Fish Berry. Indian Berry.

The dried fruit of *Anamirta Cocculus* (Linné), W. & Arn. (*A paniculata*, Colebrook; *Menispermum Cocculus*, Linné. Fam. *Menispermaceae*).

Reniform about 10 mm. long and 6 mm. broad and thick blackish-brown and wrinkled; hilum and micropyle close together, separated by a shallow sinus and connected by an obscure ridge running around the convex side. Seed urn shaped, its longitudinal and transverse sections crescent shaped; testa slightly bitter; the seed is whitish-yellow and intensely bitter.

Upon incineration Cocculus should yield not over 5 per cent of ash.

CONDURANGO.

Cortex Condurango. Condurango Bark.

Condurango is the dried bark of the stem and branches of a climbing shrub indigenous to the Northern Andean region of South America, probably *Marsdenia Condurango* Reichenbach fil. (Fam. *Asclepiadaceae*).

Condurango occurs in quilled or curved pieces about 5 cm. to 15 cm. long and 0.5 to 2 cm. wide, the bark 2 to 7 mm. thick; cork thin, grayish red brown, warty or soft-scaly; inner surface pale, yellow-gray and coarsely striated; breaking with a short and granular fracture, somewhat fibrous in the inner layer and of a pale brownish color.

A cross section examined under the microscope, exhibits a periderm of layers of thin cork cells and a primary bundle of colorless shining long bast fibres at the inner border of the primary bark; in the secondary bark, yellow stone cells but no bast fibres; in the bast narrow medullary rays, bast fibres and stone cells; numerous lactiferous vessels with dark content in all but the periderm and the inner parenchyma rich in starch; calcium oxalate in single crystals in the outer bark and elsewhere in numerous rosette aggregates.

The bark is bitter, somewhat acrid and slightly aromatic and has a somewhat pungent odor resembling pepper. Upon incineration it yields not more than 12 per cent of ash, containing traces of manganese. An infusion of condurango (1 to 5) made cold is clear, but on heating becomes turbid and on cooling clears again.

FLORES CONVALLARIAE.

CONVALLARIA FLOWERS.

Lily of the Valley Flowers.

The dried inflorescence of *Convallaria majalis* Linné (Fam. *Liliaceae*).

From 15 to 25 cm. long, the peduncle usually more than half of the length. Peduncle dull-green or below purplish-green, and more or less angled; flowers white, but usually drying brownish, usually 10 to 20 in number, borne in a more or less secund raceme on recurved pedicels which are usually from a half longer than their flowers to twice their length, pedicel subtended by a whitish, ovate, acute bract about half its length; flowers 6 to 8 mm. long and rather broader, bell-shaped, six-parted, the segments ovate, obtuse, and slightly recurved; stamens 6, included, adnate to the base of the corolla; style columnar, 3 grooved. Odor agreeable; taste sweetish, then somewhat acrid.

PERSIO.

CUDBEAR.

Red Indigo.

A purplish red powder prepared from species of *Roccella, Lecanora* and other lichens.

The aqueous or alcoholic solution of cudbear is of a deep red color which is rendered lighter in tint by the addition of acids and changed to purplish red on the addition of alkalies

2 Gm of cudbear agitated occasionally with 200 Cc. of water and then filtered, yields a deep red liquid, which may be used for the following tests:

If 5 Cc. of the aqueous solution of cudbear (1 in 100) be acidulated with 5 drops of glacial acetic acid and boiled for one minute, the addition of 5 drops of stannous chloride

T. S., and further boiling for one minute, should yield a liquid possessing only a faint pink color, (absence of *Brazilwood or logwood*, both of which produce a deep red color with this test).

If 100 Cc. of the aqueous solution of cudbear (1 in 100) be shaken with 25 grammes of kaolin in an Erlenmeyer flask during one hour and then filtered, the filtrate should be almost entirely decolorized, when compared with some of the original solution, which is to be retained for comparison (absence of a number of *coal tar colors* which are unaltered by this treatment).

When carefully ignited to constant weight cudbear should leave not more than 35 per cent of residue, consisting mainly of sodium chloride.

DIACETYL MORPHNE.

$C_{17}H_{17}(C_2H_3O)_2NO_3 = 369.194.$

A synthetic alkaloid obtained by the acteylization of Morphine.

White odorless crystalline powder of alkaline reaction and a bitter taste.

Soluble in 1600 parts of water, 26 parts of alcohol, 2 parts of chloroform, 70 parts of ether and 6 parts of benzin, also soluble in 3 parts of boiling alcohol.

Diacetyl Morphine melts at 170°-171° C.

On incineration it should not leave more than 0.01 per cent of ash.

0.1 Gm. dissolved in 10 Cc. sulphuric acid should not impart any coloration to the liquid.

If 0.1 Gm. be dissolved in 1 Cc. alcohol and to this solution 1 Cc. sulphuric acid be added and warmed, the odor of acetic ether will be perceptible in a few minutes.

If 0.1 Gm. be dissolved in 2 Cc. Iodic Acid (1-10) no iodine should be liberated (absence of morphine).

A trace of the alkaloid dissolved in a small porcelain dish with a few drops of nitric acid imparts a yellow color to the solution, the color turning greenish blue when slightly warmed, or after standing 3 to 5 minutes without warming. (Absence of morphine and test for identification).

On adding one drop of ferric chloride T. S. to an aqueous solution of 10 Cc. potassium ferricyanide (1 in 1000) and then 1 Cc. alcoholic solution of Diacetyl Morphine (1 in 100) no greenish or blue color should be produced at once (absence of morphine).

If 0.2 Gm. of the alkaloid is dissolved in 5 Cc. of water, with the aid of a few drops of diluted hydrochloric acid, and this solution is slowly poured into 5 Cc. of 5 per cent potassium hydroxide solution, shaking the test tube occasionally, a white precipitate is formed, which is quickly re-dissolved, yielding a perfectly clear and colorless solution (absence of other alkaloids), and if this solution be heated no ammonia reaction should be obtained with moistened red litmus paper (absence of ammonium salts).

DIACETYL MORPHINE HYDROCHLORIDE.

$C_{17}H_{17}(C_2H_3O)_2 NO_3HCl H_2O = 423.68.$

The hydrochloride of the synthetic alkaloid obtained by the acetylization of Morphine.

White crystalline powder of a bitter taste. Soluble in 2 parts of water, 9 parts of alcohol and 4 parts of chloroform. Almost insoluble in ether and in petroleum ether.

The salt, when heated to about 200° C., turns brown and melts at about 233° C.

Its aqueous solution is neutral and yields a white precipitate with silver nitrate T. S. insoluble in Nitric Acid.

If 5 Cc. of the acqueous solution (1 in 20) is slowly added to 3 Cc. 5 per cent potassium hydroxide solution a white precipitate appears, which rapidly dissolves and yields a perfectly clear and colorless solution (absence of other alkaloids), and if this solution be heated no ammonia reaction should be obtained with moistened red litmus paper (absence of ammonium salts).

On adding one drop of ferric chloride T. S. tc an aqueous solution of 10 Cc. potassium ferricyanide (1 in 1000) and then 1 Cc. aqueous solution Diacetyl Morphine Hydrochloride (1 in 100) no greenish or blue color should be produced at once (absence of morphine).

It should respond to the other reactions for purity when carried out as described under diacetyl morphine.

CORNUS FLORIDA.

DOG-WOOD BARK.

Bark of Flowering Dogwood or Cornel.

The dried bark of the root of *Cornus florida* L. (Fam. *Cornaceae*).

Occurring in irregular, chip-like pieces, or portions of quills, usually less than 5 cm. long and 1 to 4 mm. thick; externally of a dingy brown color, lightly fissured and thinly scaly, or reddish where the corky layer has been removed; inner surface varying from

pinkish-brown to red-purple, usually harsh to the touch from numerous short striae; fracture short, its surface whitish with yellow striae, except the inner layer, which is light purple. Odor slight and non-characteristic; taste bitter and astringent.

Upon incineration Cornus should yield not more than 10 per cent of ash.

DROSERA.

DROSERA.

Sundew, Youthwort, Lustwort.

The air dried flowering plant *Drosera rotundifolia* Linné. (Fam. *Droseraceae*), frequently mixed with the closely allied species *Drosera intermedia* Hayne and *Drosera longifolia* Linné or at times wholly substituted by by these.

A delicate plant of a reddish color throughout, with few fibrous blackish rootlets; leaves all in a basal rosette, the blade orbicular about 15 mm. in diameter abruptly contracted into a long, slender pubescent petiole, the upper surface covered with glandular hairs; scape filiform, smooth, 10 to 20 Cm. long, bearing a few parted small white fugacious flowers in a curved one-sided raceme.

Odorless; taste faintly bitter and acidulous.

Drosera yields with 60 per cent alcohol about 25 per cent of brownish red extract.

Upon incineration Drosera should yield not over 30 per cent of ash.

Drosera intermedia is identified by its spatulate leaves with blades 2 or 3 times as long as wide and glabrous petioles. Drosera longifolia by spatulate oblong to spatulate obovate leaves with blades 6 to 8 times as long as wide, and smooth petioles and scape declinate at base.

ECHINACEA.

The dried rhizome and roots of *Brauneria pallida* (Nuttall) Britton (Syn. *Echinacea angustifolia* De Candolle), (Fam. *Compositae*).

Nearly entire, cylindrical, very slightly tapering, ten to twenty cm. long, four to eight mm. in diameter; externally greyish-brown, light brown or purplish-brown, slightly annulate in the upper portion, with occasional V-shaped stem scars, somewhat what longitudinally wrinkled, or furrowed and sometimes slightly spirally twisted; fracture short, fibrous; internally, bark less than one mm. in thickness, wood thick and composed of alternate light yellowish and black wedges; the rhizome with a circular pith; odor faint, aromatic; taste, sweetish, followed by an acrid and tingling sensation, reminding one of aconite, but lacking the persistency and numbing qualities of the latter.

Microscopical structure. The drug is characterized by (1) the presence of intercellular (schizogenous) oil and resin cavities or reservoirs in both the wood and bark; (2) numerous stone cells which are distinguished by the presence of a blackish, carbon-like, resinous substance in the intercellular spaces between them and some of the adjoining parenchyma; (3) the parenchyma contains masses or aggregates of inulin; (4) the walls of the tracheae or vessels are marked with simply slit-like pores or annular and reticulate thickenings. Bast fibers occur in the stem. In some specimens true libriform or wood fibers are found.

Upon incineration Echinacea should yield about 6 per cent of ash.

EUPHORBIA PILULIFERA.

Pill Bearing Spurge. Asthma Weed.

The entire annual herb *Euphorbia pilulifera* Linné. (Fam. *Euphorbiaceae*), collected while flowering and fruiting and dried.

Roots usually present, small, branched, reddish; stems slender, cylindrical, obliquely erect, dichotomously branched from near the base, branches recurved at apices; branches and stem only sparsely leafed at base, pale greenish-brown, rough or hairy; pubescence consisting of short, nearly straight unicellular hairs becoming almost hisped at the flowering tops; leaves opposite, obliquely oblong, acute, serrulate, rusty pale green, pubescent especially on the prominent veins on the lower surface, becoming brittle on drying and usually much broken in the drug; flowers small, numerous in short peduncled axillary clusters; fruits small three celled capsules; seed small, triangular ovoid, pale brown.

Odorless, taste faintly bitter and herb-like.

Upon incineration Euphorbia Pilulifera should yield about 12 per cent of ash.

FOENUM GRAECUM.

Foenugreek Seed.

The dried ripe seeds of *Trigonella Foenum-graecum* Linné (Fam. *Leguminosae*).

Hard, smooth and somewhat shiny, brownish-yellow or yellowish-brown seeds about 3 mm. long and 2 mm. broad, obliquely rhomboidal, the flat surfaces diagonally grooved; internally yellowish, free from starch. Odor

peculiar, somewhat disagreeable. Taste disagreeable, fatty, mucilaginous and slightly bitter.

A transverse section shows microscopically the papillose epidermis covering a layer of palisade stone cells beneath which is a layer of columnar cells with broad bases and large intercellular spaces followed by a layer of parenchyma and a single layer of aleurone cells. The embryo, rich in aleurone, is enclosed in an endosperm of large and loose mucilage cells.

The powder is light reddish-yellow and under the microscope the mucilage cells of the endosperm are very distinctive. On moistening the powder with alcohol the large aleurone grains, about 15 microns in diameter, become very prominent. With solution of chloral hydrate the numerous oil globules and the characteristic elements of the cuticle and other layers are brought out.

Upon incineration Foenugreek yields about 5 per cent of ash.

ACIDUM FORMICUM.

FORMIC ACID.

A liquid composed of about 24 per cent of absolute formic acid (H. COOH = 46.02) by weight and about 76 per cent of water.

Clear, colorless, having a strongly acid reaction and a characteristic pungent odor.

Specific gravity: about 1.058 at 25° C. (1.060 at 15° C.).

Miscible with water or alcohol in all proportions.

When heated the acid is volatilized and should leave not more than 0.01 per cent of residue.

On warming the acid with mercuric chloride T. S. a white precipitate of mercureous chloride is formed.

Diluted with 5 times its water, formic acid should give no precipitate or turbidity on the addition of silver nitrate T. S. (chloride) or barium chloride T. S. (sulphate); or, after supersaturating with ammonia water, on the addition of calcium chloride T. S. (oxalic acid); or hydrogen sulphide, either after addition of a few drops of hydrochloric acid or after addition of an excess of ammonia water, (heavy metals).

If the acid be supersaturated with potassium or sodium hydroxide solution, the liquid should have no pungent or empyreumatic odor (acrolein, allyl formate, etc.).

If 1 Cc. of the acid be heated on a water-bath with 1.5 Gm. of yellow mercuric oxide and 5 Cc. of water for 10 minutes, the filtrate should not have an acid reaction (acetic acid).

If 1 drop of decinormal iodine solution be added to 10 Cc. of the acid, the iodine color should not be destroyed (sulphurous acid).

ESTIMATION.

Introduce about 5 Gc. of Formic Acid into a stoppered weighing bottle and weigh accurately. Dilute the acid with about 50 Cc. of water and titrate with normal potassium hydroxide V. S., using phenolphthalein as indicator. Multiply the number of Cc. of normal potassium hydroxide V. S. consumed, by 4.601, and divide this product by the weight of the acid taken; the quotient represents the percentage of absolute formic acid in the latter.

ACIDUM FORMICUM FORTIOR.

CONCENTRATED FORMIC ACID.

A liquid composed of about 83 per cent of absolute formic acid (H. COOH = 46.016) and about 16.5 per cent of water.

Specific gravity about 1.192 at 25° C. (1.200 at 15° C.).

When diluted with three times its volume of water, it should conform to the tests for purity given under Formic Acid.

ESTIMATION.

Introduce about 3 Cc. of Concentrated Formic Acid into a stoppered weighing bottle and weigh accurately. Dilute the acid with about 50 Cc. of water and titrate with normal potassium hydroxide V. S., using phenolphthalien as indicator. Multiply the number of Cc. of normal potassium hydroxide V. S. consumed by 4.601, and divide this product by the weight of the acid taken; the quotient represents the percentage of absolute formic acid in the latter.

FUCUS.

FUCUS.

Kelp, Bladder Wrack.

The dried thallus of *Fucus vesiculosus* Linné (Fam. *Fucaceae*).

Sometimes a meter in length, but usually in shorter pieces, from 1 to 4 cm. in width, dichotomously branched, black, usually with a slight whitish incrustation, flat, smooth, entire-margined, having a stout midrib throughout, along which are irregularly disposed pairs of air-vescicles which vary in size from that of a pea to that of a hazelnut; receptacles

terminal, compressed, mostly ovate or elliptical and about 1 cm. in length, but varying from spherical and 5 mm in diameter to linear-lanceolate and 5 cm. long, forked, solitary, or in pairs; odor strongly briny; taste saline and nauseous.

Upon incineration Fucus yields about 19 per cent of ash.

GALANGAL.

Lesser or Small Galangal.

The dried rhizome of *Alpinia officinarum*, Hance (Fam. *Zingiberaceae*).

Irregularly branched, from 2 to 10 Cm. in length and 1 to 2 Cm. thick, the branches thinner toward the base; reddish or rusty brown externally, and of a lighter orange-brown internally, marked with the fine annuli of the leaf bases, which are from 3 to 10 mm. apart and of lighter color than the general surface; cut ends of the branches circular, with recurved margin; fracture very fibrous; odor aromatic and agreeable; taste hot and spicy and much resembling ginger.

Upon incineration Galangal yields about 9 per cent of ash.

GUAIACI LIGNUM.

Guaiac Wood.

The heart wood of *Guaiacum Officinale* (Linné) or of *Guaiacum Sanctum* (Linné) (Fam. *Zygophyllaceae*).

Usually in the form of shavings, chips or raspings which should be of a greenish-brown color, heavier than water, entirely free from adhering bark and containing few chips or shavings of a whitish color (absence of sap wood). Almost odorless except when heated. Taste bitter and acrid when chewed for some time.

If powdered Guaiac wood be placed in a salt solution consisting of one part of salt to three of water, the blackish brown part only will sink; this should far exceed the other. If 10 c. c. of alcohol be shaken with 0.5 Gm. of guaiac wood for a few seconds and filtered the filtrate gives with one drop of a ten per cent. solution of ferric chloride a deep blue color.

Guaiac wood should yield not less than 15 per cent of soluble matter to alcohol and on incineration should leave about 3 per cent of ash.

HELONIAS.

False Unicorn Root.

The dried rhizome and roots of *Chamaelirium carolinianum*, Willd. (Syn. *Helonias dioica* Pursh). (Fam. *Liliaceae*).

Rhizome upright, or oblique, nearly cylindrical, from 0.5 to 3 cm. long, about 1 cm. in diameter; externally greyish brown, annulate from scars of bud-scales, upper portion with leaf bases enclosing a small bud, oblique rhizomes with a few stems scars 0.5 mm. in diameter, lower portion with numerous whitish or pale yellowish nearly straight or slightly curved wiry roots, from 5 to 8 cm. long; fracture hard and horny; internally greyish yellow, cortex 3 to 4 mm. thick, central cylinder with three or four circles of small, nearly circular fibrovascular bundles; odor distinct; taste bitter, slightly astringent.

The parenchyma cells contain numerous spherical or ellipsoidal starch grains, varying from 2 to 10 microns in diameter. Numerous raphides are found varying from 25 to 35 microns in diameter. The fibrovascular bundles vary from 20 to 30 microns in diameter, the tracheae being at the periphery and the walls marked either with annular or reticulate thickenings or simple pores. In the root, the cortex is always attached and there are usually 6 mestome strands.

Upon incineration Helonias yields about 5 per cent of ash.

IGNATIA.

IGNATIA.

St. Ignatius Bean. Ignatia Amara.

The dried seed of *Strychnos Ignatii* Bergius. (Fam. *Loganiaceae*).

About 20 to 30 mm. long, by 15 mm. broad and thick; angularly ovate with obtuse angles; externally grayish or reddish black and nearly smooth; heavy, hard and horn like, with a granular fracture and translucent in small fragments; having a small, irregular cavity in the center; nearly inodorous and intensely bitter.

Upon incineration Ignatia yields about 4 per cent of ash.

When assayed by the following process, Ignatia should contain not less than 2.5 per cent of mixed alkaloids (strychnine and brucine).

ASSAY OF IGNATIA.

Ignatia in No. 60 powder.....10 Gm.
Chloroform
Ether
Alcohol
Normal Sulphuric Acid V. S.
Ammonia Water
Distilled Water
Each a sufficient quantity.

Into a 250 Cc. Erlenmeyer flask introduce the Ignatia, add 100 Cc. Ether, 40 Cc. Chloroform and 10 Cc. Alcohol and stopper the flask tightly and agitate thoroughly; then add 5 Cc. Ammonia Water and macerate with the flask closely stoppered and with frequent agitation for 12 hours. Then transfer the contents of the flask to a small percolator which has been provided with a pledget of purified cotton packed firmly in the neck and the outlet inserted in a separater containing 15 Cc. of normal sulphuric acid V. S.. When the liquid has passed through the cotton, pack the Ignatia firmly in the percolator with the aid of a glass rod and wash the flask with four portions (5c. each) of a mixture of chloroform 1 volume, ether 3 volumes and pass this through the drug in the percolator. Next stopper the separator and shake well for 2 minutes; allow the liquid to separate and draw off the acid liquid into another separator. Repeat the shaking out with successive portions of 5 Cc. and 3 Cc. of normal sulphuric acid V. S. and collect the acid washings in another separator. If a drop of the last acid solution yields a precipitate with mercuric potassium iodide T. S., repeat the shaking with another portion of 3 Cc. normal sulphuric acid V. S. To the combined acid solution in the second separator, add a small piece of red litmus paper, 25 Cc. of chloroform and then sufficient ammonia water to render the liquid alkaline and shake the separator thoroughly. When the liquids have separated, draw off the chloroform into a tared beaker or flask and repeat the shaking out of the alkaline liquid with two successive portions of 15 Cc. each of chloroform; mix the chloroform solutions and evaporate the solvent and heat on a waterbath to a constant weight and subtract from this the weight of the tared vessel and multiply the remainder by 10, which will give the percentage of total alkaloids in the Ignatia. (To be continued.)

Pharmaceutical Formulas

PROPOSED FOR A. PH. A. RECIPE BOOK.

Committee:

M. I. WILBERT.....Washington, D. C
FRANKLIN M. APPLE.....Philadelphia, Pa.
THEO. D. WETTERSTROEM.....Cincinnati, O.
JAMES M. GOOD.....St. Louis, Mo.
OTTO RAUBENHEIMER, Brooklyn, N. Y., *Chm.*

The Committee on the A. Ph. A. Recipe Book, after due consideration, presented the following report to the Council and at the Boston meeting:

"*1 Advisability of Publication*:

There is great need of an authentic collection of reliable formulas of non-official galenical preparations, etc., in the United States and our A. Ph. A. is the proper body to publish such a book, just as our sister associations in Great Britain, Germany, etc., have already done.

2. Scope and Character:

The Recipe Book should be progressive and helpful and should include formulas for things which are used and useful and should be divided ino several parts,

a. Formulas deleted from U. S. P. & N. F.

b. Formulas of foreign pharmacopœias and formularies, which are often prescribed or for which the retail pharmacist could make propaganda efforts.

c. Various other formulas, often named after their originators, scattered at present in pharmaceutical and medical journals, books and proceedings and also hospital formularies.

d. Toilet articles, cosmetics, and perfumery.

e. Technical Receipts as battery fluids, photographic solutions, cleansing fluids, insecticides, etc.

f. Agricultural preparations, veterinary remedies, poultry foods and medicines, etc.

g. Soda water, beverages, syrups, etc.

3. Plans and Details of Publication:

It is not necessary to publish the Recipe Book hurriedly. We recommend that the department on pharmaceutical formulas in the new JOURNAL OF THE A. PH. A. should first print these formulas before their publication in book form. They cvould furthermore be

printed in duplicate, namely, in the reading pages and also as a filler in the advertising pages, from which they could be cut out by the pharmacists interested, and collected in the form of a card index.

The members of the A. Ph. A. should be asked to submit formulas used in their vicinity, which after publication and criticism could be voted on by retail pharmacists, actively engaged in preparing and dispensing medicines.

The final publication in book form should include only such formulas as are desirable to the majority of the retail pharmacists. As undoubtedly some of these formulas will in time be admitted into the N. F. or U. S. P., such a book will at the same time serve as a stepping-stone thereto."

In order to make this department a success and a help to pharmacy, the hearty cooperation of the members of the A. Ph. A. is solicited. All comments and criticisms, as well as new formulas (if possible in the metric system) should be sent directly to the chairman,

OTTO RAUBENHEIMER,
1341 Fulton St., Brooklyn, N. Y.

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ABBREVIATIONS

used in Department of *Pharmaceutical Formulas,* and in Department of *Synonyms.*

Am. Dis.—American Dispensatory.
Anvers—Formulaire de la Société de Pharmacie d'Anvers.
Aust. Pharmacopœa Austriaca.
Belg.—Pharmacopœa Belgica.
B P.—British Pharmacopœia.
B. P. C.—British Pharmaceutical Codex.
Buch.—Buchheister's Vorschriftenbuch.
Can.—Canadian Formulary.
Codex—Codex Française.
D. A-B—Deutsches Arzneibuch.
D. M.—Dieterich's Manual.
Dorv.—Dorvault L'Officiene.
D. Ap. V.—Deutscher Apotheker Verein.
Dresd. Ap. V.—Dresdener Apotheker Verein.
Hess. Ap. V.—Hessischer Apotheker Verein.
Lux. Ap. V.—Luxemburg Apotheker Verein.
Munch. Ap. V.—Münchener Apotheker Verein.
E. B.—Ergänzungsbuch.
F. B.—Formulæ Magistrales Berolinenses.
F. P. F.—Formulaire des Pharmaciens Français.
Hag.—Hager's Pharmazeutische Praxis.
Hag. E.—Hager's Ergänzungsband.
Hell—Hell's Manual.
Helv.—Pharmacopœa Helvetica.
Ital.—Farmacopea Italiana.
Mar.—Martindale Extra Pharmacopœia.
Med.—Medicamenta (Milano).
N. Dis.—National Dispensatory.
N. F.—National Formulary.
Orosi—Farmacologia Italiana.
P. I.—Præscriptiones Internationales.
Ph. F.—Pharmaceutical Formulas (London).
P. J. F.—Pharmaceutical Journal Formulary.
Proc.—Proceedings A. Ph. A.
U. S. Dis.—U. S. Dispensatory.
U. S. P.—U. S. Pharmacopœia.

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No. 1.

AQUA COSMETICA KUMMERFELDI.

Kummerfeld's Cosmetic Water or Lotion.
Kummerfeld 'sches Waschwasser.

Camphor	10 Gm.
Acacia in fine powder	20 Gm.
Glycerin	50 Gm.
Precipitated Sulphur	100 Gm.
Rose Water	820 Gm.
To make	1000 Gm.

Triturate the finely powdered Camphor with the Acacia and the Precipitated Sulphur, then add the Glycerin and gradually the Rose Water, triturating constantly so as to obtain a homogeneous lotion.

Shake well before dispensing.
—Dresdener Vorschriften.

The Erzänzungsbuch of the Deutscher Apotheker Verein (corresponding to our National Formulary) omits the Acacia and increases the Precipitated Sulphur to 120 Gm. Having given both formulas a fair trial I find that the Dresden formula gives the best results both pharmaceutically as well as therapeutically. O. R.

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No. 2.

ACETUM HYDRARGYRI BICHLORIDI.

Bichloride of Mercury Vinegar.
Vinegar of Corrosive Sublimate.
Sublimat Essig.

Mercuric Bichloride	1 Gm.
Diluted Acetic Acid	300 Gm.

Dissolve.

This solution is recommended by the well-known German dermatologist, Prof. Jessner, as an application against vermin on the head

of children. He claims this to be more effective than the old-time *Acetum Sabadillae*. In our opinion this preparation, being a solution of mercuric chloride 1 : 300, should of course be used with great care and should by no means be used in this strength when the scalp has been abrased by scratching, which is very often the case.

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No. 3.

LANOLINUM.

Lanolin. Hydrous Wool-fat.

D. A-B. V.

Wool-fat (anhydrous),	15 parts	65 Gm.
Water	5 parts	22 Gm.
Liquid Petrolatum	3 parts	13 Gm.
To make		100 Gm.

To be mixed at a gentle heat.

It is a yellowish white, almost odorless, unctuous mass. This formula has been thoroughly tried by a number of pharmacists and was found to give an excellent preparation which is not near as sticky as the commercial kinds.

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No. 4.

UNGUENTUM CEREUM.

Wax Ointment—Wachsalbe.

D. A-B. V.

Peanut Oil	7 parts
Yellow Wax	3 parts

"Wax ointment is yellow."

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No. 5.

LANOLIMENTUM BOROGLYCERINI.

Boroglycerinlanolin. Byrolin.

E. B.

Boric Acid	2. Gm.
Glycerin	18. Gm.
Water	10. Gm.
Paraffin Ointment, D. A-B. V.	20. Gm.
Lanolin, D. A-B. V.	50. Gm.
Oil of Neroli	ii Drops.
Oil of Bergamot	
Oil of Lemon	of each iii Drops.

Dissolve the Boric Acid in the Glycerin by heat, then dilute with the water. Melt the Paraffin ointment and the Lanolin (The German Pharmacopœia formulas for both these preparations will be found in this department) and to this mixture gradually add the Boric Acid and Glycerin solution. Stir until cool and then add the oils.

This is a white, soft ointment, possessing soothing and healing properties. Its consistency is soft enough to be filled in collapsible tubes.

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No. 6.

UNGUENTUM PARAFFINI.

Unguentum Durum.

Paraffin or Hard Ointment.—Paraffin Salbe.

D. A.—B. V.

Ceresin	4 parts
Liquid Petrolatum	5 parts
Wool-fat, anhydrous	1 part

Paraffin ointment is yellowish white and hard. The wool-fat serves to bind the ceresin and the liquid petrolatum into a uniform hard ointment.

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No. 7.

UNGUENTUM MOLLE.

Soft Ointment—Weiche Salbe.

D. A-B. V.

Yellow Petrolatum.

Lanolin, equal parts.

Soft ointment is yellowish.

This is an elegant soft ointment base, which is not sticky and which is readily absorbed. It is especially useful for ichthyol ointment, and for other medicaments which are intended to be absorbed. Another great advantage of *Soft ointment* is that liquids can be incorporated very readily.

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No. 8.

PASTA BISMUTHI.

Bismuth Paste. Beck's Bismuth Paste.

Bismuth Subnitrate	30. Gm.
White Wax	5. Gm.
Paraffin	5. Gm.
Yellow Petrolatum	60. Gm.
To make	100. Gm.

The Petrolatum, Wax and Paraffin are melted and then sterilized by boiling. Allow the mixture to cool, triturate well with the Bismuth Subnitrate and fill into jars.

This Bismuth paste was originated by Dr. Emil G. Beck of Chicago, and is to be injected into fistulous tracts, tuberculosis sinuses and abcess cavities. For this reason the preparation must be sterilized and before using the jar must again be placed into a waterbath, which is gradually brought to boiling. According to Dr. Beck, care must be used to avoid the admixture of water during the preparation of the paste. As the bismuth sub-

nitrate was frequently reduced and became black when it was added to the boiling petrolatum mixture, therefore this old method of preparation has given way to the new method given above.

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No. 9.

PULVIS INSPERSORIUS ANTISEPTICUS.

Antiseptic Dusting Powder.

Lycopodium.
Zinc Oxide,
Starch,
Talc, of each..... 24 Gm.
Boric Acid..... 4 Gm.

To make.....100 Gm.

Triturate to a very fine powder.

Luxemburg Ap. V.

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No. 10.

PULVIS LAXANS.

Laxative Powder.

Calomel ..... 0.2 Gm.
Jalap, in fine powder..... 1.0 Gm.

Mix them intimately.

Formulae Berolinenses.

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No. 11.

PULVIS INFANTIUM HUFELANDI.

Hufeland's Infant Powder.
Hufeland's Kinderpulver.

E. B.

Magnesium Carbonate..... 10. Gm.
Valerian ..... 10. Gm.
Orris ..... 15. Gm.
Anise ..... 4. Gm.
Saffron ..... 1. Gm.

Reduce the drugs to fine powder and gradually add the Magnesium Carbonate with constant trituration, so as to obtain a uniform powder. Hufeland's Infant Powder is a dry, grayish powder, with a strong valerian odor.

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No. 12.

PULVIS DENTIFRICIUS ALKALINUS.

Alkaline Tooth Powder.
Poudre Dentifrice Alkaline.

CODEX.

Calcium Carbonate, precipitated 50 Gm.
Magnesium Carbonate..... 25 Gm.
Oil of Peppermint..... 25 Drops.

Mix well and keep in a stoppered bottle.

No. 13.

ARGENTI IODIDUM NASCENDI.

Nascent Silver Iodide.

Silver Nitrate..... 2. 2 Gm.
Potassium Iodide..... 2. 2 Gm.
Distilled Water..... 50 Cc.
Mucilage of Irish Moss, N. F.,
a sufficient quantity.

To make.....100 Cc.

For a heavy, coarse precipitate the Potassium Iodide and the Silver Nitrate are dissolved separately, each in 5 Cc. of Distilled Water. The two solutions are subsequently mixed and the mixture, after being thoroughly shaken, is diluted with the requisite amount of Distilled Water and Mucilage to make 100 Cc.

Wilbert, M. I.
Am. J. Pharm. 1906, v. 78, p. 67.

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No. 14.

BALNEUM ACIDI BORICI.

Boric Acid Bath.

Boric Acid..... 12.5 Gm.
Water, a sufficient quantity

To make..... 1000.0 Cc.

Dissolve.

Brit. Pharm. Codex, 1911, p. 1111.

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No. 16.

BALNEUM ALKALINUM.

Alkaline Bath.

Sodium Carbonate, in crystals ..... 1.0 Gm.
Water, a sufficient quantity

To make ..... 1000.0 CC.

Dissolve.

Brit. Pharm. Codex, 1911, p. 1111.

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BALNEUM EFFERVESCENS.

Effervescent Bath.

Sodium Bicarbonate..... 3.0 Gm.
Sodium Acid Sulphate..... 1.5 Gm.
Water, a sufficient quantity

to make..... 1000.0 CC.

Dissolve the Sodium Bicarbonate in the Water, and add the Sodium Acid Sulphate, in lumps or cakes, to the solution.

Brit. Pharm. Codex, 1911, p. 1111.

No. 17.

CREMOR AD RASENDUM.

Surgical Shaving Cream.

Tallow	25.00 Gm.
White Wax	4.68 Gm.
Hard Soap	2.85 Gm.
Tragacanth, in fine powder	0.64 Gm.
Starch, in fine powder	1.56 Gm.
Oil of Lavender Flowers	0.26 Cc.
Oil of Lemon	0.13 Cc.
Oil of Wintergreen	0.13 Cc.
Distilled Water, warm, a sufficient quantity.	
To make	100.00 Gm.

Melt the Tallow and Wax and add them to the Hard Soap previously dissolved in 62.5 Cc. of the Water, stir well. When the emulsion formed has cooled to about 50°, add the mixed Tragacanth and Starch, the Oils, and sufficient Water to make up the desired weight.

Brit. Pharm. Codex, 1911, p. 1135.

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No. 18.

ELIXIR PEPTOLACTICUM.

Peptolactic Elixir.

Stronger Glycerin of Pepsin	12.5 Cc.
Diluted Hydrochloric Acid	1.5 Cc.
Diluted Lactic Acid	1.5 Cc.
Solution of Cochineal	0.5 Cc.
Simple Elixir, a sufficient quantity.	
To make	100.0 Cc.

Mix.

Brit. Pharm. Codex, 1911, p. 1150.

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No. 19.

FERRI CARBONAS NASCENDI.

Nascent Ferrous Carbonate.

Ferrous Sulphate	3.2 Cc.
Distilled Water	1.5 Cc.
Potassium Carbonate	1.6 Gm.
Glycerin, a sufficient quantity	
To make	100.0 Gc.

Dissolve the Ferrous Sulphate in the distilled Water by means of heat, add a portion of Glycerin, then dissolve the Potassium Carbonate in the remaining portion of Glycerin, allow to cool and mix.

The resulting solution is clear, transparent and dark green in color. It decomposes readily when exposed to air and moisture, and should be directed to be liberally diluted when administered.

Wilbert, M. I.

Am. J. Pharm. 1907, v. 79, pp. 525-526.

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No. 20.

GLYCERINUM PEPSINI FORTIUS.

Stronger Glycerin of Pepsin.

Syn.: Glycerol of Pepsin.

Pepsin	15.0 Gm.
Diluted Hydrochloric Acid	5.0 Cc.
Glycerin	50.0 Cc.
Simple Elixir	5.0 Cc.
Disilled Water, a sufficient quantity.	
To make	100.0 Cc.

Add the Pepsin to 30 Cc. of the Distilled Water, previously mixed with the Hydrochloric Acid and Glycerin, shake well, and set aside until clear; then decant or filter and add the Simple Elixir, with sufficient Distilled Water, if necessary, to make up to the required volume. This preparation contains about 8 grains of pepsin in 1 fluidrachm, or 0.6 Gm. in 4 Cc.

Brit. Pharm. Codex, 1911, pp. 1198-99.

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No. 21.

LIQUOR SAPONIS AETHEREUS.

Ethereal Soap Solution.

Oleic Acid	35.0 Cc.
Potassium Hydroxide Solution, saturated, a sufficient quantity.	
Alcohol	15.0 Cc.
Oil of Lavender Flowers	0.2 Cc.
Methylated Ether (sp.g. 0.720)	100.0 Cc.

Mix the Oleic Acid and Alcohol and neutralize with the saturated solution of Potassium Hydroxide in water (1 in 1), of which nearly 7.5 Cc. will be required, using phenolphthalein as indicator. Allow the neutralized product to cool, and add the Oil and Ether.

Brit. Pharm. Codex, 1911, p. 1261.

No. 22.

SAPO LIQUIDUS.

Liquid Soap.

Sodium Hydroxide.....	40 Gm.
Potassium Hydroxide.....	40 Gm.
Cotton Seed Oil.....	500 Cc.
Alcohol	250 Cc.
Distilled Water, a sufficient quantity.	
To make	2500 Cc.

Wilbert, M. I.

Proc. Am. Pharm. Ass. 1907, v. 55, p. 120.

Synonyms

This departmen is intended to be of great practical value to the pharmacist. In his address as chairman of the Section of Practical Pharmacy and Dispensing at the Richmond meeting, in May, 1910 (Proc. Vol. 58, p. 1091), the writer recommended the study of synonyms, pharmaceutical, chemical and botanical, to the individual practical and dispensing pharmacist. Instead of dividing the synonyms into these classes, it has been decided, after due consideration, to classify them as Latin, English, German and French. In view of our increasing membership in Cuba, it would also seem advisable to include synonyms in Spanish. If desired, synonyms in other languages, as Italian, Swedish, Danish, Bohemian, etc., might also be given.

In order to make this department a success, the co-operation of all members is requested and due credit will be given.

A list of the abbreviations used will be found in the Department of *Pharmaceutical Formulas.*

Respectfully submitted,

OTTO RAUBENHEIMER.

LATIN.

Latin-English.

Abrus Precatorius (seeds)—Jequirity, Jumble Beads, Prayer Beads, Indian Licorice, Wild Licorice.

Aerugo—Verdigris.

Aethiops—Black Mercury Sulphide.

Antidotum Arsenici Helv—Iron Hydroxide wih Magnesia (U. S. P.).

Aqua Benedicta Rulandi—Wine of Antimony.

Aqua Carmelitorium—Spir Melissae Co. (D. A-B.).

Aqua Cosmetica Kummerfeldi—Kummerfeld's Cosmetic Lotion.

Aqua Naphae—Orange Flower Water.

Aqua Neroli—Orange Flower Water.

Benzosulphinidum (U. S. P.)—Benzosulphinide, Saccharin.
Anhydro-ortho-sulphamide Benzoic Acid.
Benzoyl Sulphonic Imide.
Gluside, Glucusimide.
Glycosine, Glycophenol.
Garantose, Glusimide.
Saccharol, Saccharinol.
Saccharinose.
Sykose, Saxin.
Neo-Sacharin, Zuckerin.

Cerussa—Lead Carbonae, White Lead.

Cerussa Nigra—Black Lead, Plumbago, Graphite.

Cinnabaris—Cinnabar, Native Red Mercury Sulphide.

Colla Piscium—Fish Glue, Isinglass, Ichthyocolla.

Cuprum Aluminatum—Copper Alum.

Elixir Pro—Tinct. Aloes Comp. (D. A-B.).

Elixir Proprietatis—Tinct. Aloes Comp.

Elixir Purgans—Tinct. Jalap Co. (N. F.).

Euchininum—Euquinine, Quinine Carbonic Ether, Quinine Ethylcarbonate.

Euquinina—Euquinine, Quinine Carbonic Ether, Quinine Ethylcarbonate.

Guttae Amarae Baumé—Tinct. Ignatiae, (Cod).

Guttae Anglicae—Acetum Opii.

Guttae Britannicae—Acetum Opii.

Guttae Nigrae—Acetum Opii.

Guttae Batemani—Tinct Pectoralis (N. F.).

Guttae Pectorales—Tinct. Pectoralis (N. F.).

Guttae Botkini—Dr. Botkine's Stomach Drops.

Guttae Hoffmanni—Hoffmann's Drops.

Guttae Hoffmanni—Spir. of Ether.

Guttae Inósemzoffi—Prof. Inosemzoff's Cholera Drops.

Lapides Cancrorum—Crabstones.

Lapill Cancrorum—Crab's-eyes.

Lapis Cancri—Eye Stones.

Lapis Divinus—Cuprum Aluminatum.

Lapis Pumicis—Pumice Stone.

Lapis Vulcani—Pumice Stone.

Oleoresina Abies Balsamea—Balsam of Fir, Canada Turpentine.

Potassa Caustica (B. P.)—Potassium Hydroxide.

Radix Pastinacae Aquaticae—European Water Parsnip Root.
Radix Sii Palustris—European Water Parsnip Root.
Rhus Aromatica (bark of root)—Sweet Sumach, Fragrant Sumach, Trefoil Sumach, Squaw-berry.
Rhus Glabra (fruit)—Sumach: Smooth,—Mountain,— Upland,— Scarlet,— Sleek,—White,— Pennsylvania,—Sumach, Vinegar Tree.
Sapo Kalinus (D. A-B.)—Potassa Soap, Soft Soap.
Sium Latifolium (root)—European Water Parsnip.
Soda Tartarata (B. P.)—Rochelle Salt.
Soda Vitriolata—Sodium Sulphate.
Spiritus Oryzae (exOryza)—Arrack (a liquor obtained by the fermentation and distillation of rice and sugar in the East Indies, etc.).
Spiritus Phosphori (N. F.)—Spirit of Phosphorus.
Spiritus Pyroxylicus—Methyl Alcohol, Wood Alcohol.
Spiritus Rosmarini—Essence of Rosemary.
Spiritus Russicus (E. B.)—Russian Spirit.
Spiritus Sacchari (e Saccharo)—Rum.
Spiritus Salis Ammoniaci Anisatus—Anisated Spirit Ammonia.
Spiritus Salis Ammoniaci Causticus, or
Spiritus Salis Ammoniaci—Ammonia Water (10%).
Spiritus Salis Ammoniaci Aromaticus—Aromatic Spirit of Ammonia.
Terra Infusoria—Infusorial Earth, Diatomaceous Earth, Siliceous Earth, Fossil Flour, Kieselguhr, Kieselgur.
Terra Siliccea—Infusorial Earth, Diatomaceous Earth, Siliceous Earth, Fossil Flour, Kieselguhr, Kieselgur.
Testa Ovorum—Egg Shells.
Tinct. Camphorae Comp. (B. P.)—Paregoric.
Tinct. Opii—Tinct. Opium.
Tinct. Opii Acetica—Vinegar of Opium.
Tinct. Opii Anisata—Paregoric.
Tinct. Opii Benzoica D. A-B.—Paregoric.
Tinct. Opii Camphorata—Camphorated Tinct. of Opium, Paregoric.
Tinct. Opii Composita—Diarrhoea Mixture Squibbs.
Tinct. Opii Crocata (P. I.)—Crocated Tinct. of Opium.
Tinct. Opii Denarcotina—Denarcotinized Tinct. of Opium.
Tinct. Opii Deodoratha—Deodorized Tinct. of Opium.
Tinct. Opii Nigra—Acetum Opii.
Tinct. Opii Sedativa—Acetum Opii.
Tinct. Opii Rosseau (Cod.)—Fermented Tinct. Opium.
Tinct. Opii Simplex (D. A. B.)—Tinct. of Opium.
Tinct. Papaveris (N. F.)—Tinct of Poppy.
Tinct. Pectoralis (N. F.)—Bateman's Drops.
Tinct. Persionis (N. F.)—Tinct. Cudbear.
Tinct. Persionis Comp. (N. F.)—Comp. Tinct. Cudbear.
Tinct. Phosphori (N. F.)—Spirit Phosphorus.
Tinct. Phosphori Aetherea—Aether Phosphoratus.
Tinct. Pimpinellae (N. F.)—Tinct. Pimpinella.
Tinct. Pini Composita (E. B.)—Wood Tincture.
Tinct. Picis Carbonis—Liquor Carbonis Detergens, Liquor Picis Carbonis (B. P.).
Tinct. Piperis Hispanici—Tinct. Capsici.
Tinct. Pomorum Ferrata—Tinct. Ferri Pomata (N. F.).
Trimethylaminum (E. B.) 10%—Propylamine.
Vinum Spumans—Sparkling Wine, Champagne.
Vinum Stibiatum (P. I.)—Wine of Antimony.

ENGLISH.

English-Latin.

Ammonia Salt—Ammonii Chloridum.
Ammonia Stone—Ammonii Carbonus.
Ammoniated Tincture of Quinine—Tinct. Quininae Ammoniata (B. P.).
Ammonium Carbonate—Ammonii Carbonas.
Ammonium Sesquicarbonate—Ammonii Carbonas.
Ammonium Subcarbonate—Ammonii Carbonas.
Analgesine—Antipyrina.
Anethol—Anetholum (Stearopten of Oil of Anise).
Antichlor—Sodii Thiosulphas.
Benne Oil—Oleum Sesami.
Benzoic Aldehyde—Benzaldehydum.
Dimethylketone—Acetonum.
Eye bright—Euphrasia Officinalis.
Eye Wort—Euphrasia Officinalis.
Eye Stone—Lapides Cancrorum.
Formamine—Hexamethylenamima (U. S. P.)
Formin—Hexamethylenamina (U. S. P.).
Francincense—Olibanum.

Fuchsine—Rosanilina hydrochloras.
Goulard's Cerate—Ceratum Plumbi Subacetatis (U. S. P.).
Goulard's Ointment—Ceratum Plumbi Subacetatis (U. S. P.).
Goulard's Salve—Ceratum Plumbi Subacetatis.
Goulard's Extract—Liquor Plumbi Subacetatis.
Goulard's Lotion—Liquor Plumbi Subacetatis dilutum.
Goulard's Wash—Liquor Plumbi Subacetatis dilutum.
Goulard's Water—Liquor Plumbi Subacetatis dilutum.
Guaiacol—Methyl-pyrocatechol.
Guaiacol Benzoate—Guaiacolis Benzoas, Benzosol.
Guaiacol Carbonate—Guaiacolis Carbonas, Duotal.
Guaiacol Thionate—Kalium Sulfo-guaiacolicum (E. B.), Thiocol.
Guaiacol Valerate—Guaiacolis Valeras, Geosote.
Hebra's Itch Ointment—Ung. Sulphuris Co. (N. F.).
Hebra's Lead Ointment—Ung. Diachylon (U. S. P.).
Hebra's Ointment—Ung. Diachylon (U. S. P.).
Hebra's Salve—Ung. Diachylon (U. S. P.).
Hebra's Salicylated Ointment—Ung. Diachylon Salicyl (B. P. C.).
Hebra's Soap Spirit—Spri. Saponis Kalinus, Lin. Saponis Molle.
Ichthalbin—Ichthyol Albuminat.
Parodyn—Antipyrina.
Phytalbumin—Abrin (albuminoid of seeds of Abrus Precatorius.
Quadruplex Pills—Pilulae Quadruplices, Pilulae Ferri et Quininae Comp. (N. F.).
Quatuor Pills—Pilulae Quadruplices, Pilulae Ferri et Quininae Comp. (N. F.).
Quevenne's Iron—Ferrum Reductum.
Rattlesnake Fern—Botrychium Virginian.
Rattlesnake Bite—Thalictrum polyganum.
Rattlesnake Herb—Actaea Alba.
Rattlesnake Root—Nabulus Serpentarius, Trillium Cernuum.
Rattlesnake Flag—Eryngium aquaticum.
Rattlesnake Weed—Eryngium aquaticum.
Rattlesnake's Master—Eryngium aquaticum.
Rattlesnake's Beans—Aruba Cedron, Semen Cedronis.
Rattlesnake's Root—Cimicifuga.
Red Oil—Acid Oleicum crudum.
Red Tartar—Tartarus Crudus, Argol.
Triplex Pills—Pilulae Triplices (N. F.).
Triplex Pills Francis'—Pilulae Triplices (N. F.)
Verdigris=Impure Copper Subacetate.
Vermilion=Red Mercury Sulphide.
Veronal—Acidum Diaethylbarbituricum (D. A-B. V.), Diaethylmalonyl-Urea.
White Copperas—Zinci Sulphas.
White Earth—Kaolinum.

GERMAN.

German-Latin.

A. B. C. Anispulver—Pulv. contra Pediculos.
A. B. C. Balsam—Ung. Elemi (E. B.).
A. B. C. Kraut—Herb. Spilthanes Acmellæ, Herb. Acmellæ (E. B.)
A. B. C. Salbe—Ung. Altheae (E. B.), Ung. Flavum (E. B.).
Abfuehr-beeren—Fruct Rhamni Cathart.
Abfuehr-brausepulver—Pulv. Effervescens Comp.
Abfuehr-latwerge—Confect Sennae, Electuare Senna (D. A-B.).
Abfuehr-limonade—Liq. Magnes. Citrat.
Abfuehr-mus—Confect. Sennae, Electuare Sennae (D. A-B.).
Abfuehr-oel—Ol. Ricini.
Abfuehr-pillen—Pil. Cathart. Comp.
Abfuehr-pillen schwarze—Pil. Aloes et Ferri, Pil. Alœticæ ferratæ (D. A-B.).
Abfuehr-pulver—Pulv. Glycyrrhiz-Comp., Pulv. Laxans (F. B.), Pulv. Jalapae.
Abfuehr-quetschen—Pulpa Tamarind.
Abfuehr-rinde—Cortex Frangulae.
Abfuehr-saft—Syrup Rhei, Syrup Sennae cum Mannae.
Abfuehr-salz—Magnes. Sulphas.
Abfuehr-tee—Species Laxantes (N. F.), Species Lignorum (D. A-B.), Cort. Frangulae.
Abfuehr-wurzel, gelbe—Rad. Rhei.
Hamburger Plaster—Emplastrum Fuscum (N. F.).
Hamburger Salbe—Ung. Fuscum (N. F.).
Hamburger Tropfen—Tinct. Aloes et Myrrhae or Tinct. Aloes Com. (D. A-B.).
Hirschhorn Salz—Ammonii Carbonas.
Kummerfeld's Waschwasser—Aqua Cosmetica Kummerfeldi.
Muttertropfen—
alte and neue—Tinct. Rhei aquosa (N. F.), Aq. Aromatic Rubr.
braune—Tinct. Valerianae, Tinct. Castorei.
gelbe aetherische—Tinct. Valerian. Aether. (D. A-B.).

rote—Tinct. Cinnamon, Tinct. Apoplectic, Rubr. (D. M.), Tinct. Aromatic (N. F.), Tinct. Carminativ. (E. B.), Tinct. Galbani (D M.).
saure—Mist. Sulphuric Acid (N. F.).
schwarze—Tinct. Aloes Comp.
Wedell's—Tinct. Zedoariæ Comp. (D. A-B.).
weisse—Aq. Aromatica (E. B.), Liq. Ammon. Anis. (D. A-B.), Spir. Aetheris, Spir. Melissæ Comp. (D. A-B.).
Stearin—Acidum Stearicum.
Stearin Oel—Acidum Oleinicum.
Tolle Salbe—Electuar Theriacale (E. B.).
Tollkirsche—Belladonna.
Tollkirschblaetter—Fol. Belladonnae.
Tollkirschwurzel—Rad. Belladonnae.
Tollkoerbelkraut—Herb. Conii Maculat.
Tollkoerner—Coculus Indicus.
Tollkraut—Fol. Belladonnae, Fol. Stramonii.
Tollkraut wurzel—Rad. Belladonnae.
Tollruebe—Rad. Bryoniae.
Tollstechapfel—Fol. Stramonii.
Tollwurzel—Rad. Belladonnae, Rad. Hyoscyami.

FRENCH.

French-Latin.

Absinthe commune—Absinthium.
Absinthe grande—Absinthium.
Absinthe pontique—Artemisia Pontica.
Absinthe romaine—Artemisia Pontica.
Acajou a pommes—Anacardiuum Occidentale.
Acétanilide—Acetanilidum.
Acétate aleumineux—Aluminii Acetas.
Acétate Ammoniacal—Ammonii Acetas.
Acétate Ammoniacal liquide—Liquor Ammonii Acetatis.
Acétate d'alumine—Aluminii Acetas.
Acétate d'alumine liquide—Liquor Aluminii Acetatis.
Acétate d'ammoniaque—Ammonii Acetas.
Acéate d'ammoniaque liquide—Liquor Ammonii Acetatis.
Acétate basique de plomb dissus—Liquor Plumbi Subacetatis.
Acétate d'éthyle—Aether Aceticus.
Acétate de cuivre—Cupri Acetas.
Acétate de cuivre brut—Cupri Acetas.
Acétate de cuivre crystallisé—Cupri Acetas.
Acétate neutre de cuivre—Cupri Acetas.
Acétate neutre de plomb—Plumbi Acetas.
Acétate de plomb—Plumbi Acetas.
Acétate de plomb liquide—Liquor Plumbi Subacetatis.
Acétate de potasse sec—Potassi Acetas.
Acétate de potassium—Potassii Acetas.
Acétate de potassium solution—Liquor Potassii Acetatis.
Acétate de Sodium—Sodii Acetas.
Acétate de Soude—Sodii Acetas.
Acétate de terre pisante—Barii Acetas.
Acétate de terre pondereuse—Barii Acetas.
Acétate de Zinc—Zinci Acetas.
Acété ammoniacal—Ammonii Acetas.
Acété de litharge—Plumbi Acetas.
Acété de plomb—Plumbi Acetas.
Acété saturne—Plumbi Acetas.
Acétite v. Acétate.
Acétolés (Vinaigres)—Aceta.
Acétone—Acetonum.
Acétonedi ethylsulfone—Sulphonalum.
Acétylpara-aminosalol—Salophen.
Ache—Apium Graveolens.
Ache Céleri—Apium Graveolens.
Ache des marais—Apium Graveolens.
Ache d' eau—Sium Latifolium, Radix Sii Palustris, Postinacæ Aquaticæ.
Ache des chiens—Aethusa Cynapium Herba Aethusæ.
Ache des montagnes—Levisticum levisticum, Rad. Levistici.

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COMMITTEE ON NATIONAL FORMULARY.

The following are the new formulas for petroxolin preparations adopted for inclusion in the forthcoming edition of the National Formulary. The Committee is desirous of having them thoroughly tried by pharmacists in different sections of the country so as to avoid, as much as possible, unfavorable comment after the final publication of the book. Comments and criticisms *based on practical experience* will be welcome. All communications should be addressed to the Chairman of the Committee, Prof. C. Lewis Diehl, 932 Cherokee Road, Louisville, Ky., who will submit the comments to the Sub-Committee having the matter in charge.

PETROXOLINUM LIQUIDUM.

Liquid Petroxolin. (Liquid Petrox.)

Liquid Petrolatum.....	50 Gm.
Oleic Acid	28 Gm.
Oil of Lavender Flowers.....	2 Gm.
Stronger Ammonia Water.....	5 Gm.
Alcohol	15 Gm.

Mix the Liquid Petrolatum and Oleic Acid in a flask, add the Alcohol and then the Stronger Ammonia Water, and warm the

mixture on a water bath, with frequent agitation, until it becomes clear. Lastly add the Oil of Lavender Flowers and mix thoroughly.

PETROXOLINUM CHLOROFORMI CAMPHORATUM.

Camphorated Chloroform Petroxolin. (Camphor and Chloroform Petrox.)

Chloroform	25 Gm.
Camphor	25 Gm.
Liquid Petroxolin	50 Gm.

Dissolve the Camphor in the Chloroform and add the Liquid Petroxolin.

PETROXOLINUM CADINI.

Cade Petroxolin. (Cade Petrox.)

Oil of Cade	25 Gm.
Liquid Petroxolin	75 Gm.

Mix them.

PETROXOLINUM CREOSOTI.

Creosote Petroxolin. (Creosote Petrox.)

Creosote	20 Gm.
Oleic Acid	5 Gm.
Liquid Petroxolin	75 Gm.

Mix them.

PETROXOLINUM EUCALYPTOLIS.

Eucalyptol Petroxolin. (Eucalyptol Petrox.)

Eucalyptol	20 Gm.
Liquid Petroxolin	80 Gm.

Mix them.

PETROXOLINUM GUAIACOLIS.

Guaiacol Petroxolin. (Guaiacol Petrox.)

Guaiacol	20 Gm.
Oleic Acid	5 Gm.
Liquid Petroxolin	75 Gm.

Mix them.

PETROXOLINUM HYDRARGYRI.

Mercury Petroxolin. (Mercury Petrox.)

Mercury	30 Gm.
Hydrous Wool-Fat	15 Gm.
Solid Petroxolin	55 Gm.

Triturate the Mercury with the Hydrous Wool-Fat until globules of the intimately distributed metal are no longer visible when the mixture is examined under a lens magnifying ten diameters; then thoroughly incorporate the solid petroxolin.

PETROXOLINUM IODI.

Iodine Petroxolin. (Iodine Petrox, 10 per cent.)

Iodine	10 Gm.
Oleic Acid	40 Gm.
Alcohol	20 Gm.
Liquid Petrolatum	23 Gm.
Oil of Lavender Flowers	2 Gm.
Stronger Ammonia Water	5 Gm.

Reduce the Iodine to a coarse powder by trituration in a glass mortar, transfer it to a suitable flask, add the Alcohol and Oleic Acid and agitate the contents of the flask until the Iodine is dissolved. Then add the Oil of Lavender Flowers and the Liquid Petrolatum, mix the liquids and finally introduce the Stronger Ammonia Water and shake the mixture until a clear solution results.

PETROXOLINUM IODI DILUTUM.

Diluted Iodine Petroxolinum. (Iodine Petrox, 5 per cent.)

Iodine Petroxolin	50 Gm.
Liquid Petroxolin	50 Gm.

Mix them.

Alternate Formula.

Iodine in coarse powder	5 Gm.
Liquid Petroxolin	95 Gm.

Dissolve the Iodine by agitation with the Liquid Petroxolin in a stoppered bottle.

PETROXOLINUM IODOFORM.

Iodoform Petroxolin. (Iodoform Petrox.)

Iodoform	3 Gm.
Acetone	20 Gm.
Oleic Acid	10 Gm.
Eucalyptol	3 Gm.
Liquid Petroxolin	64 Gm.

Dissolve the Iodoform in the Acetone, add the Eucalyptol, the Oleic Acid and the Liquid Petroxolin and mix the ingredients thoroughly.

PETROXOLINUM MENTHOLIS.

Menthol Petroxolin. (Menthol Petrox.)

Menthol	5 Gm.
Liquid Petroxolin	25 Gm.

Dissolve the Menthol in the Liquid Petroxolin by agitation.

PETROXOLINUM METHYLIS SALICYLATIS.

Methyl Salicylate Petroxolin. (Methyl Salicylate Petrox.)

Methyl Salicylate	20 Gm.
Liquid Petroxolin	80 Gm.

Mix them.

PETROXOLINUM NAPHTHOLIS.

Naphthol Petroxolin. (Naphthol Petrox.)

Betanaphthol	10 Gm.
Liquid Petroxolin	90 Gm.

Dissolve the Betanaphthol in the Liquid Petroxolin by agitation.

PETROXOLINUM PHENOLIS.

Phenol Petroxolin. (Phenol Petrox.)

Phenol	5 Gm.
Liquid Petroxolin	95 Gm.

Dissolve the Phenol in the Liquid Petroxolin by agitation in a stoppered bottle.

PETROXOLINUM PICIS.

Tar Petroxolin. (Tar Petrox.)

Oil of Tar	25 Gm.
Liquid Petroxolin	75 Gm.

Mix them.

PETROXOLINUM SALICYLATUM.

Salicylated Petroxolin. (Salicylated Petrox.)

Salicylic Acid	10 Gm.
Oleic Acid	5 Gm.
Liquid Petroxolin	85 Gm.

Dissolve the Salicylic Acid in the Oleic Acid and Liquid Petroxolin.

PETROXOLINUM PHENOLIS CAMPHORATUM.

Camphorated Phenol Petroxolin. (Camphorated Phenol Petrox. Campho. Phenic Petrox.)

Phenol	12.5 Gm.
Camphor, in powder	37.5 Gm.
Liquid Petroxolin	50.0 Gm.

Mix the Camphor and Phenol and when the mixture has liquefied add the Liquid Petroxolin and mix them thoroughly.

PETROXOLINUM SULPHURIS.

Sulphur Petroxolin. (Sulphur Petrox.)

Sublimed Sulphur	3 Gm.
Linseed Oil	37 Gm.
Oleic Acid	30 Gm.
Liquid Petroxolin, a sufficient quantity to make	100 Gm.

Heat the Sublimed Sulphur and Linseed Oil in a flask, on a sandbath, until the sulphur is dissolved, then allow the mixture to cool, add the Oleic Acid, and sufficient Liquid Petroxolin to make the product weigh 100 Gm. Warm the mixture slightly, if necessary, to obtain a clear liquid.

PETROXOLINUM SULPHURIS COMPOSITUM.

Compound Sulphur Petroxolin. (Compound Sulphur Petrox.)

Sulphur Petroxolin	10.0 Gm.
Oil of Cade	10.0 Gm.
Thymol	0.3 Gm.
Eucalyptol	3.0 Gm.
Oil of Turpentine	30.0 Gm.
Liquid Petroxolin, a sufficient quantity to make	100.0 Gm.

Mix the Thymol and Eucalyptol, add the Oils and the Sulphur Petroxolin, and finally a sufficient quantity of Liquid Petroxolin to make the product weigh 100 Gm.

PETROXOLINUM TEREBINTHINAE VENETAE.

Venice Turpentine Petroxolin. (Venice Turpentine Petrox.)

Venice Turpentine	20 Gm.
Liquid Petroxolin	80 Gm.

Mix them.

PETROXOLINUM SPISSUM.

Solid Petroxolin. (Solid Petrox.)

Paraffin	30 Gm.
Liquid Petrolatum	22 Gm.
Oleic Acid	35 Gm.
Oil of Lavender Flowers	3 Gm.
Alcohol	5 Gm.
Stronger Ammonia Water	5 Gm.

Melt the Paraffin with the Liquid Petrolatum, on a water bath, add the Oleic Acid, and transfer the mixture to a warm mortar; then immediately add the Oil of Lavender Flowers, followed by the previously mixed Alcohol and Stronger Ammonia Water, and stir the mixture continuously until it cools.

INCREASED REQUIREMENTS IN PENNSYLVANIA.

The Bureau of Professional Educaton of Pennsylvania has determined upon a completed first year high school course, or its equivalent, for licensure to practice pharmacy. In accordance with this standard the State Pharmaceutical Examining Board has adopted a new rule that applicants for license as assistant pharmacist, applying after March 1, 1912, and applicants for license as pharmacist, matriculating after July, 1911, must have a certificate of preliminary educational qualifications issued by said bureau.

The next examination will be the last one to which applicants for assistant's license will be admitted without first obtaining this certificate. It will be conducted in Harrisburg on Saturday, February 17, 1912.

SYNDICATING PESSIMISM.

"If your life has lead you to doubt the existence of honor in man and virtue in woman; if you feel that religion is a pretense, that spirituality is a sham, that life is a failure, and death the entrance to nothingness; if you have absorbed all the poison philosophy of the world's pessimists, and have committed folly of believing it,—don't syndicate it."—*William George Jordan.*

Editorial Notes and Announcements

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All communications for insertion in the JOURNAL, or respecting advertising should be sent to the Editor.

RULES OF CENSORSHIP.

1. All contracts for advertising are accepted subject to revocation at the discretion of the Publication Committee.

2. No advertisement will be accepted for any article or service, the sale or furnishing of which is illegal in the state of publication or in any state in which the JOURNAL circulates.

3. Advertisements will not be accepted for articles belonging to the class of preparations commonly known as patent medicines, nor for any medicinal preparation advertised directly to the laity, or which is advertised in such a manner as to encourage self medication.

4. Copy which is vulgarly or extravagantly worded, or which makes extravagant claims of therapeutic virtues will not be accepted.

5. No advertisement will be accepted which by intent or inference would result in deceiving, defrauding or misleading the reader.

The Association does not accept responsibility for the opinions of contributors. Offensive personalities must be avoided.

Under the rules of the Post Office the JOURNAL can be regularly mailed only to bona-fide paid subscribers. Subscriptions and association dues should be sent to the Treasurer, H. M. Whelpley, 2342 Albion Place, St. Louis, Mo.

Requests for back numbers, and claims for missing numbers should be sent to the Editor.

Claims for missing numbers will not be allowed if sufficient notice has not been given of change of address, and in no case if received later than sixty days from the date of issue.

In giving change of address, always give both the old and the new address.

OFFICERS AND COMMITTEES.

One function of the JOURNAL is to afford a medium for announcements to the members.

The editor will be pleased to afford space for all such notices and announcements.

Copy should be in the hands of the printer not *later* than the twentieth of the month preceding the date of issue.

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RELATION OF THE PHARMACOPŒIA TO THE PRACTICE OF MEDICINE.

Dr. Cohen's admirable address at the Fifty-ninth Convention of the A. Ph. A. has been reproduced in pamphlet form and is now ready for distribution.

It is an address that the average pharmacist and physician will find as entertaining as a novel, and vastly more edifying.

Your physician friends will thank you for the opportunity of reading it.

While they last, the reprints will be sent to any A. Ph. A. member who applies for them, or to any N. A. R. D. member whose application is forwarded through Secretary Potts.

Address, Secretary of the A. Ph. A., Scio, Ohio.

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A GENERAL ACKNOWLEDGEMENT.

That the first number of the JOURNAL was not a disappointment to the members of the Association is indicated by the numerous letters of congratulation received by the editor.

In most cases the congratulations are so personal and of such a flattering character that editorial modesty will not permit of their reproduction here. As the number of letters is greater than can well be answered individually within a reasonable time, the editor hereby expresses to each and all his sincere thanks for their compliments and good wishes.

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THE SIXTIETH A. PH. A. CONVENTION.

With characteristic forehandedness, the druggists of Denver are already busy in the formulation of plans for the A. Ph. A. convention which opens in that city August 19, and from this time forward each number of the JOURNAL will contain announcements relating either to the business program or to the projected entertainments.

Located within the shadow of famous mountain peaks, Denver is the entrance gate-

way to the celebrated "Rockies," and is the center of the human activities of one of the most picturesque and interesting regions on the continent.

Owing to its advantageous situation Denver is a competitive point for the railroads, and as a consequence round-trip fares will be very reasonable.

Following the convention, opportunities will be afforded for interesting side trips to the Yellowstone National Park, Salt Lake City, Colorado Springs, Pikes Peak, and other points.

An effort will be made to bring the visitors from the East and South together at St. Louis and to have a special A. Ph. A. train to Denver from that point.

Matters of General Interest

EIGHTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

WASHINGTON AND NEW YORK.

September, 1912.

Patron—His Excellency, the President of the United States.

RULES ON PAPERS, THEIR PRESENTATION, DISCUSSION AND PUBLICATION.

To All Prospective Authors of Contributions to this Congress:

In order that the objects of the Congress may be attained the following are necessary:

a. That as many as possible of the papers to be presented at the various meetings of the Congress and its various Sections, be printed and distributed to members attending the Congress prior to the opening thereof.

b. That as little time be given to presentation as is consistent with adequate exposition of the salient points of the communication.

c. That as much time and opportunity be given for discussion as may be needed for a complete presentation of all the views of those members in attendance upon such discussion.

d. That the discussion be recorded in sufficiently full manner correctly to reflect the views of those taking part in the discussion.

e. That the Proceedings be published in complete form as soon after the close of the Congress as is at all feasible.

After considerable study, inquiry and exhaustive criticism of the tentative rules submitted to the chemists and the chemical and similar societies of the world, March 6, 1911, and September 1, 1911, the Executive Committee of this Congress has concluded that hearty and earnest co-operation of all members of the Congress in the carrying out of the following rules will result in the practical realization of all these things; without such individual co-operation, the officers of the Congress can do very little toward such realization.

Duplicate copies of papers and their abstracts are *thoroughly essential* to quick and accurate printing; authors should have all their contributions in final form (see Rule 21).

1. Papers or other like contributions should be *original and not elsewhere read or published;* however, prior publication of Governmental researches, which publication is made in accordance with the law of such country, shall be exempt from the above restriction as to publication.

2. All papers or like contributions should be as *concise* as possible and must contain the name and post-office address of the respective authors; further, what number, if any, of reprints is desired. (See Rules 8 and 10.)

3. All papers should be *in duplicate* and legibly written, preferably typewritten; formulæ should be carefully inserted by hand as simply as possible.

4. Each sheet should be as nearly 8x12 inches as convenient and should be written on one side only, and *not* on both sides.

5. Each paper should be accompanied by an abstract thereof *in duplicate;* formulæ should be carefully inserted by hand, as simply as possible.

6. All references to other work should state carefully the sources of the citation, giving the exact reference to the original publication.

7. Illustrations, curves and the like should be on separate smooth white sheets and drawn and lettered with Indian ink clearly enough to bear a linear reduction to one-half or two-thirds and when so reduced should not exceed the page size of the "Report," which will be about 4¼ by 7 inches.

8. Authors of papers which are to be illustrated by lantern slides are urgently requested to state on their paper the size of slide used so that suitable arrangements may be made. Failure to observe this may result in disappointment and delay. (See Rule 2.)

9. The Congress obligates itself to have its final Report and Proceedings, including subject and authors' index, completed and ready

for distribution on or before December 31, 1912; in case those Reports and Proceedings be not ready for distribution by that date, authors of all papers received and accepted *after* June 30, 1912, may then publish in any journal or publication that they may elect. (*Note*: This refers only to the Report and Proceedings bound in paper; members desiring cloth bound sets can obtain them at an advanced charge over the $5.00 membership fee; such advanced charge will be announced later, but will probably be $2.50; delivery of these cloth-bound sets will be about 90 days later than of the paper-bound sets.)

Authors of papers received *before* the close of June 30, 1912, may publish those papers in any publication they may elect *after* the paper is read or *after* the Congress has adjourned. (See Rule 12.)

10. Authors of papers accepted and printed in full or in abstract will receive free of cost and all delivery charges, not to exceed fifty (50) reprints of each paper or abstract; additional copies of reprints can be had upon payment of the prices for such copies, which prices will be announced later. The Congress cannot undertake to furnish reprints of papers if the order for such reprints is not attached to the paper or abstract when received by the American Committee. (See Rule 2.)

11. Papers and their abstracts, *both in duplicate*, must be in the hands of the American Committee not later than June 30, 1912. All papers received *prior* to that time and accepted will be printed in their respective Sectional Volumes and distributed to such of the attending members of the Congress as may desire them, at or before the opening of the Congress. Papers received *after* that time, if accepted, will be printed, but may appear in an appendix which may or may not be ready by the opening of the Congress; the Congress cannot then undertake to print them along with the papers of those sections to which they may be assigned and which were received prior to June 30, 1912.

12. No paper offered to and accepted by this Congress can be at any time published elsewhere without giving credit to this Congress for such article or publication. However, Governmental publication of papers contributed to the Congress are exempt from the above requirement as to giving credit to this Congress.

13. All authors, as a matter of course, agree not to publish their accepted papers in any other publication except as herein provided, and, further, they agree to abide by any final decision of the Congress with respect to such paper or papers, their presentation, discussion or printing.

14. Rejections by Sectional Committees will not be final; their decisions will be reviewed by the Committee on Papers and Publications, but rejection by that Committee will be final.

15. Authors of finally rejected contributions will be notified in writing of such rejection immediately after it has been made, and, as far as the Congress is concerned, such final rejection is strictly secret and confidential. Rejected manuscripts are to be returned to their authors. (See Rule 16.)

16. The Congress will not publish a list of rejected papers nor state what papers have been rejected; directly after the closing of the Congress all records relating to rejected papers and like contributions will be destroyed; any and all proceedings as to rejected papers or like contributions, so far as the Congress is concerned, will be strictly secret and confidential.

17. Any paper which is of a pronounced polemical, advertising or personal character may be thereby disqualified and for that reason alone rejected, regardless of whatever merit the paper may otherwise possess.

18. The Congress reserves the right to reject any paper or other contribution that may be offered to it.

19. The Congress reserves the right to print the full paper only, or the abstract only, or the title only, in each case with the author's name and post-office address.

20. Authors are requested to state on the papers themselves their preferences for the sections in which they wish them to be read; the Congress will respect that request wherever practicable, but reserves the right to assign the paper to any other section that may be deemed more appropriate, and such disposition is final.

21. Authors will *not* receive printer's proofs of their papers or abstracts; nor will their papers or abstracts be revised after receipt by the American Committees; printing will be accurate to copy.

22. The time consumed in reading or presenting the substance of any paper by an author or his representative at a meeting of a Section must not exceed ten (10) minutes, except by special permission of the Sectional Executive Committee.

23. In the absence of an author or his rep-

resentative the paper will be read by title only, and if there be any discussion it must be based upon the paper as printed, because neither the paper itself nor its abstract will be read; exceptions to this rule can be made only under regulations that may be adopted by each Sectional Executive Committee.

24. Discussions of a pronounced polemical, advertising or personal character may be ruled out by the Chair on that ground alone and not permitted to appear in the printed record; the ruling of the Chair in such matters is final and is not subject to revision or appeal.

25. Participants in discussions will be given an opportunity of editing the manuscript reports of their remarks, but printer's proofs will not necessarily be submitted to them, although wherever practicable they will be so supplied.

26. Participants in discussions must speak from the rostrum and *not* from the floor.

Respectfully,

EIGHTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY,

EDWARD W. MORLEY,
Honorary President.

WILLIAM H. NICHOLS,
President.

BERNHARD C. HESSE,
Secretary.

25 Broad Street, New York City,
December 28, 1911.

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THE ANNUAL MEETING OF THE AMERICAN DRUGGISTS' FIRE INSURANCE CO.

The annual stockholders and directors' meeting of the American Druggists' Fire Insurance Company was held at Cincinnati, O., on January 16th and 17th. There were present from outside of the city the following directors and members of the Advisory Committee: Charles H. Avery, L. G. Heinritz, J. H. Beal, W. S. Elkin, Jr., William C. Anderson, G. O. Young, Lewis C. Hopp, Simon N. Jones, John D. Muir, Walter Rothwell, George B. Kauffman, E. B. Heimstreet, Samuel C. Davis, and Charles H. Huhn.

The annual report of the officers of the company indicated a growing and prosperous business during the year 1911. During the year the A. D. F. I. Co. saved its policyholders the sum of $27,954.48 which was retained by the policyholders, and represents a direct saving. It was shown that since the company has commenced business it has saved its policyholders the sum of $85,540.33.

On January 1, 1912, the American Druggists' Fire Insurance Company had policies in force to the amount of $7,933,966.02 at a premium of $83,367.79. Since the company commenced business it has written for the retail drug trade of the country insurance to the amount of $22,875,782.02, at a premium of $257,294.89. During the year an increase of 32 per cent in business written, and of 26 per cent in premium was shown over the year 1910. At the end of the fifth year the insurance in force and premiums thereon were more than four times greater than the first year.

ASSETS AND LIABILITIES.

Jan. 1, 1912.

ASSETS.

U. S. government, Ohio municipal and county bonds	$292,822.98	
Cash on hand and in bank, and accounts in course of collection	26,250.91	
Accrued interest on bonds and deposits	4,618.88	
Office furniture	561.60	
Making a total of		$324,254.37

LIABILITIES,

including liability for re-ins. reserve and fire losses not reported until after Jan. 1st, but incurred in December.

Agents' commissions, salaries, taxes and all other liabilities accrued	$ 3,669.32	
Estimated liability for fire losses not reported until after Jan. 1st	1,500.00	
Re-insurance reserve	41,975.69	
Furniture and fixtures not admitted as asset under insurance laws.	561.60	
Making a total of		$ 47,706.61
Leaving a surplus as to policyholders of		$276,547.76

After making a saving to the policyholders which was retained by them of $27,954.48, the following net profits are shown:

Profit from investments, less $927.51 adjusted depreciation, leaving	$10,957.23	
Underwriting profit, etc.	20,653.02	
Net profits for the year		$ 31,610.25

Out of the above net profits from all sources, the Board of Directors at its annual meeting declared a dividend on the capital of the company of nine (9) per cent, payable

March 1st. The extraordinary reserve of the company was increased by $7,902.56, leaving the sum of $5,797.69 as undivided profits. In addition to the increase in extraordinary reserve and undivided profits, the re-insurance reserve of the company was during the year increased by $8,554.93, making as shown above, a total re-insurance reserve on the 31st day of December, 1911, of $41,975.69.

INCREASED SERVICE FOR THE RETAIL DRUG TRADE.

The Board of Directors approved a re-insurance treaty with a large Eastern Company, which enables the A. D. F. I. Co. to increase its service to the drug trade of the country. Hereafter the A. D. F. I. Co. will double the amount of insurance which it will carry on any one risk, this new feature to go into effect within the very near future. With the increased facilities in the service which can thus be rendered, it is estimated that the company can serve fully 95% of the retail drug trade throughout the country, in fire-protected towns with all the insurance they require, and the advantages which thus accrue to the drug trade of the country are of very great importance. The increase in service will apply throughout the country, outside of Greater New York and Philadelphia.

ELECTION OF OFFICERS.

At the annual stockholders' meeting the following directors were elected: Charles H. Avery, L. G. Heinritz, J. H. Beal, W. S. Elkin, Jr., William C. Anderson, G. O. Young, A. O. Zwick, Lewis C. Hopp, Simon N. Jones, John D. Muir, Walter Rothwell, George B. Kauffman, M. S. Kahn, E. B. Heimstreet, Frank H. Freericks.

After the organization of the new Board of Directors, the following officers were elected: President, Charles H. Avery; Vice President, L. G. Heinritz; Secretary and General Counsel, Frank H. Freericks; Treasurer, George B. Kauffman; Executive Committee, Charles H. Avery, L. G. Heinritz, Walter Rothwell, J. H. Beal, George B. Kauffman, A. O. Zwick, and Frank H. Freericks.

Under a change in the Code of Regulations the Advisory Committee of the company will hereafter be selected by the Executive Board.

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THE RICHARDSON BILL.

Below is given the text of the bill known as H. R. 14,060, introduced into Congress by Representative Richardson, and designed to amend the Federal Food and Drugs Act in accordance with the recommendations of President Taft to the last session of Congress.

The bill is especially designed to prevent the making of false and misleading statements regarding the curative virtues of proprietary medicines. The bill is deserving of careful study, and the editor will be pleased to provide space for its discussion by members of the Association.

That sections six, seven, and eight of the food and drugs act, approved June thirtieth, nineteen hundred and six, be amended as follows:

Amend section six by inserting after the word "substances" the words "or device" and by inserting after the words "or other animals" the words "also soda and potash lye; also cosmetics, hair preparations and dyes and toilet preparations; also tobacco, snuffs, tobacco substitutes and all tobacco products," so that section six shall read as follows:

"Sec. 6. That the term 'drug' as used in this act shall include all medicines and preparations recognized in the United States Pharmacopœia or National Formulary for internal or external use, and any substance or mixture of substances, or device, intended to be used for the cure, mitgation, or prevention of disease of either man or other animals; also soda and potash lye; also cosmetics, hair preparations and dyes and toilet preparations; also tobacco, snuffs, tobacco substitutes and all tobacco products. The term 'food' as used herein shall include all articles used as food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound."

Amend section seven by changing the word "a" to "any" in the phrase "is sold under or by a name," and transfer this amended phrase to the second line, immediately following the words "National Formulary."

Add after part second of the section the following:

"Third. If it contain any methyl alcohol or wood alcohol.

"Fourth. If any cosmetic, hair preparation or hair dye or toilet preparation contain any poisonous or deleterious ingredient.

"Fifth. If tobacco, snuff, or tobacco products contain any added poisonous or deleterious ingredient which may render such article injurious to health; or if any substance has been mixed or packed with these prod-

ucts so as to reduce or lower or injuriously affect their quality or strength; or if any substance has been substituted in whole or in part for the articles; or if they be mixed, colored, powdered, coated, or stained in any way whereby damage or inferiority is concealed; or if they consist in whole or in part of filthy, decomposed, or putrid animal or vegetable matter," so that section seven, so far as it relates to drugs, shall read as follows:

"Sec. 7. That for the purposes of this act an article shall be deemed to be adulterated—

"In the case of drugs—

First. If, when a drug recognized in the United States Pharmacopœia or National Formulary is sold under or by any name, it differs from the standard of strength, quality, or purity, as determined by the test laid down in the United States Pharmacopœia or National Formulary official at the time of investigation: *Provided,* That no drug defined in the United States Pharmacopœia or National Formulary shall be deemed to be adulterated under this provision if the standard of strength, quality, or purity be plainly stated upon the bottle, box, or other container thereof, although the standard may differ from that determined by the test laid down in the United States Pharmacopœia or National Formulary.

"Second. If its strength or purity fall below the professed standard of quality under which it is sold.

"Third. If it contain any methyl alcohol or wood alcohol.

"Fourth. If any cosmetic, hair preparation or hair dye or toilet preparation contain any poisonous or deleterious ingredient.

"Fifth. If tobacco, snuff, or tobacco products contain any added poisonous or deleterious ingredient which may render such article injurious to health; or if any substance has been mixed or packed with these products so as to reduce or lower or injuriously affect their quality or strength; or if any substance has been substituted in whole or in part for the articles; or if they be mixed, colored, powdered, coated, or stained in any way whereby damage or inferiority is concealed; or if they consist in whole or in part of filthy, decomposed, or putrid animal or vegetable matter."

Amend section eight as follows:

After the word "food" add "or drugs"; and further amend section eight after the words "any particular" by adding the following: "or when represented to the public in any way as having any remedial property, or if the compounder, manufacturer, or vender thereof is not authorized both under the law of the state or community where the article is produced, manufactured, or offered for sale, directly to the consumer, to practice medicine or pharmacy, or both, as the case may be; or if the label or labels or any advertisement, poster, circular, or otherwise, contain any false or misleading claims or representations relative to disease or symptoms of disease, to be read or intended to be read by the laity, which are intended or calculated to produce in the minds of persons reading them or to whom the same may be read, a false impression of the existence of disease in their own bodies, or if any statement or expression of opinion concerning its physiological, therapeutic, nutritive, or remedial property be made or promulgated in any manner so as to deceive or mislead, or which shall deceive or tend to deceive the purchaser, or if it be a drug offered for sale to the laity, directly or indirectly, which contains any habit-forming or deleterious ingredients, to wit, acetanilid, antipyrin, acetphenetidin, anesthesin, alcohol, aspirin, alpha and beta eucain, arsenic, barium salts, carbolic acid, caustic hydroxids, chloroform, chloral, cocaine, creosote, cantharides, croton oil, caffein, cannabis, heroin, holocain, hydrocyanic acid, lead salts, morphin, methyl alcohol, mercury, salts, novocain, nux vomica, orthoform, phenacetin, the phosphides, theobrimin, theophyllin, trional, stovain, strychnine, vernol, yellow phosphorus, cotton root, ergot, pennyroyal, rue, savin, tansy, the poisonous alkaloids, all heart depressants or excitants, or any compound or preparation or derivative of any of the foregoing, and to any food or drug product which is falsely branded as to the state, territory, or country in which it is manufactured or produced."

After the word "produced" at the end of the first paragraph of section eight, further amend section eight by adding the following:

"All these articles or preparations or derivatives shall bear a label containing not only the name by which they are known, but also the names of the parent substances from which they are derived," so that section eight as amended shall read as follows:

"Sec. 8. That the term 'misbranded' as

used herein shall apply to all drugs or articles of food or articles which enter into the composition of food or drugs, the package or label of which shall bear any statement, design, or device regarding such article, or the ingredient or substances contained therein, which shall be false or misleading in any particular, or when represented to the public in any way as having any remedial property, or if the compounder, manufacturer, or vender thereof is not authorized both under the law of the state or community where the article is produced, manufactured, or offered for sale directly to the consumer, to practice medicine or pharmacy, or both, as the case may be; or if the label or labels or any advertisement, poster, circular, or otherwise, contain any false or misleading claims or representations relative to disease or symptoms of disease, to be read or intended to be read by the laity, which are intended or calculated to produce in the minds of persons reading them or to whom the same may be read, a false impression of the existence of disease in their own bodies, or if any statement or expression of opinion concerning its physiological, therapeutic, nutritive, or remedial property be made or promulgated in any manner so as to deceive or mislead, or which shall deceive or tend to deceive the purchaser, or if it be a drug offered for sale to the laity, directly or indirectly, which contains any habit-forming or deleterious ingredients, to wit, acetanilid, antipyrin, acetphenetidin, anesthesin, alcohol, aspirin, alpha and beta eucain, arsenic, barium salts, carbolic acid, caustic hydroxids, chloroform, chloral, cocaine, creosote, cantharides, croton oil, caffein, cannabis, heroin, holocain, hydrocyanic acid, lead salts, morphin, methyl alcohol, mercury, salts, novocain, nux vomica, orthoform, phenacetin, the phosphides, theobromin, theophyllin, trional, stovain, strychnine, vernol, yellow phosphorus, cotton root, ergot, pennyroyal, rue, savin, tansy, the poisonous alkaloids, all heart depressants or excitants, or any compound or preparation or derivative of any of the foregoing, and to any food or drug product which is falsely branded as to the state, territory, or country in which it is manufactured or produced. All these articles or preparations or derivatives shall bear a label containing not only the name by which they are known, but also the names of the parent substances from which they are derived."

Council Business

COUNCIL LETTER NO. 9.

PHILADELPHIA, January 2, 1912.

To the Members of the Council:

The following communication has been received:

"SECRETARY OF THE COUNCIL—Council letter No. 8 has just been received. The proposed budget of appropriations for the year 1912 should not be passed upon without being given critical consideration. I believe that it would be to the advantage of the Association to simplify the various classifications under which the expenditures are made, as for example, the cost of stenographers should be charged to the Journal account. Journals for the reporter should be charged to the expenditures of the Report on the Progress of Pharmacy. Premium on the treasurer's bond, insurance, certificates and such items, should be classified with miscellaneous expenses. The cost of badges and bars might likewise be included under this heading. The appropriations for the N. F. Committee should be in one lump sum and not divided into appropriations. As a member of that committee, I see the difficulty of separating under different headings the expenditures on behalf of the work of that committee. Part may be experimental work, part may be clerical, postage and incidentals. Same may be said of the Committee on Membership. Why should two appropriations appear on the budget? These are all suggestions that should also receive careful consideration by the Committee on Revisions of By-Laws so as to simplify the work of the Association in the future.

"There is another item that appears on this budget, namely, an appropriation to the Committee on Unofficial Standards for $150. At the Boston meeting an appropriation of $300 was voted to this committee for the work of this year. We are now in the midst of preparing standards for the N. F. revision. While considerable of the work is accomplished, a great amount still remains unfinished, and at this critical juncture to curtail the appropriation to this committee would be a sad mistake. While not one cent will be spent unnecessarily in the progress of this work, the Association should assume a liberal policy so that the members of the committee will not be handicapped in making proper investigations on which to base their reports.

For the above reasons I am constrained to offer as a substitute for Motion No. 19, "Approval of Budget for 1912," the following:

"(a) That the appropriation for the Journal be made $3700, including the item of $200 for stenographers.

"(b) That the appropriation to the N. F. Committee be one lump sum of $1728.62.

"(c) That the appropriation to the Committee on Unofficial Standards be $300.

"(d) That the appropriation to the Committee on Membership be fixed at $125 and that the item of unexpended portion of special appropriation to this committee, amounting to $84.81, be merged into the treasury."

GEORGE M. BERINGER.

For convenience, these motions will be considered as follows:

Motion No. 20 (Appropriation of $3700 for the Journal). Moved by G. M. Beringer, seconded by J. W. England, that the appropriation for the Journal be made $3700, including the item of $200 (in the Budget) for stenographers.

Motion No. 21 (Appropriation of $1728.62 to the N. F. Committee). Moved by G. M. Beringer, seconded by J. W. England, that the appropriation to the National Formulary Committee be one lump sum of $1728.62, instead of two separate items, as in the Budget.

Motion No. 22 (Appropriation of $300 to Committee on Unofficial Standards). Moved by G. M. Beringer, seconded by J. W. England, that the appropriation to the Committee on Unofficial Standards be $300, instead of $150, as in the Budget.

Motion No. 23 (Appropriation of $125 to Committee on Membership). Moved by G. M. Beringer, seconded by J. W. England, that the appropriation to the Committee on Membership (in the Budget) be fixed at $125, and that the item of unexpended portion of special appropriation to this committee, amounting to $84.81, be merged into the treasury.

In connection with this subject the following has been received from Otto Raubenheimer:

"SECRETARY OF THE COUNCIL—With great surprise I notice the reduction in the appropriation for the Historical Section from $50 to $25, quite especially as you wrote me about the middle of November that the sum of $50 had been appropriated. (What Mr. Raubenheimer refers to was the statement made by the Secretary of the Council that the budget of appropriations for *1911-12*—(Council Letter No. 27, June 14, 1911)—contained an appropriation for the Section on Historical Pharmacy of $50, or the usual appropriation, but this was before the adoption of the motion making the *new* fiscal year commence with January 1, 1912, and hence applied only to the fiscal year between July 1, 1911, and December 31, 1911.—SECRETARY TO THE COUNCIL.)

"This historical work of collecting documents, books, reliques, etc., pertaining to pharmacy, is of great importance, and is increasing from year to year. As Hermann Schelenz, the German pharmaceutical historian, expressed himself some time ago, the A. Ph. A. was the first pharmaceutical body to undertake this work in a systematic manner and is to be congratulated upon its rapid progress.

"Surely $50 annually is not out of the way, especially as it is used up by the Historian in buying supplies, material, folding boxes, etc., and clerical assistance. The Chairman and Secretary, I believe, pay the postage used in their correspondence out of their own pockets.

"As Chairman of Section on Historial Pharmacy I would respectfully request that the sum of $50 be appropriated as in former years.

"OTTO RAUBENHEIMER."

Motion No. 24 (Appropriation of $50 to Section on Historical Pharmacy). Moved by Otto Raubenheimer, seconded by T. D. McElhenie, that the appropriation to the Historical Section (in the Budget) be made $50.

It will be understood that if the above motions carry, the Budget as changed, will be considered adopted.

J. W. ENGLAND,
Secretary of the Council.

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COUNCIL LETTER NO. 10.

PHILADELPHIA, January 22, 1912.

To the Members of the Council:

At the meeting of the City of Washington Branch, held December 20, 1911, Prof. Henry B. Floyd, 1016 Massachusetts avenue, N. W., Washington, D. C., was elected as a member of the Council, succeeding Dr. Murray Galt Motter, whose term of office had expired.

The Committee on Finance has corrected two errors in Budget of Appropriations for 1912—one, changing the title of Proceedings to Report on the Progress of Pharmacy, and the other, changing the appropriation to the Section on Historical Pharmacy from $25 to $50.

Motions Nos. 20, 21, 23 and 24, relating to Budget of Appropriations for 1912, have each received a majority of affirmative votes.

The following communication has been received:

"Secretary of the Council:

"DEAR SIR—It has occurred to us that it would be of great benefit to our readers as well as to the publishers of the National Formulary for us to publish a commentary on the various formulas contained in that

work, somewhat as the authors of the dispensatories have published comments on the text of the Pharmacopœia. Before proceeding with this undertaking, however, we desire to obtain from the owners of the National Formulary their permission to quote extensively from the text of that work. Will you please be so kind as to lay this matter before the Council for the purpose of ascertaining whether or not they will grant us the desired permission?

"Yours very truly,
"THE DRUGGISTS' CIRCULAR."

"New York, Jan. 9, 1912."

The following resolutions on the death of Charles E. Dohme are submitted to the Council:

CHARLES E. DOHME.

WHEREAS, The American Pharmaceutical Association has suffered a severe loss by the death of its beloved member, Charles E. Dohme, who passed away, after a lingering illness, on the evening of December 7, 1911; and

WHEREAS, It is but proper that the Association should place on record its sense of grief caused by the severance of ties extending over a period of forty-eight years; be it therefore

Resolved, That in the death of Charles E. Dohme the American Pharmaceutical Association has lost one of its most loyal members, who at all times during the many years of service as President, First and Second Vice-President, local Secretary and member of the Council, had endeared himself to all his associates by an untiring devotion to the interests and welfare of the Association, and who was ever ready to aid in its support with an open hand and heart,

Resolved, That the members of the American Pharmaceutical Association will ever cherish with warm affection the memory of their lamented associate, who by his affable manner and sterling qualities set an example worthy of emulation.

Resolved, That these resolutions be spread upon the minutes of the Association and that a copy be sent to the family of our deceased friend.

C. LEWIS DIEHL,
JAMES H. BEAL,
CHAS. CASPARI, JR.,
Committee.

Do you approve above resolutions? They will be regarded as *Motion No. 25 (Resolutions on Charles E. Dohme)*.

Motion No. 26 (Charles L. Wright a Life Member). Moved by H. M. Whelpley, seconded by J. H. Beal, that Charles L. Wright, of Webb City, Mo., a retired pharmacist and a member of the A. Ph. A. since 1901, be made a life member of the A. Ph. A. old style, without the proceedings.

Motion No. 27 (Election of Members). You are requested to vote on the following applications for membership:

No. 82. Ludwig Schiff, Western Wholesale Drug Co., Los Angeles, Cal., rec. by J. W. England and W. A. Pearson.

No. 83. Otto Frederick Frese, Sergt. 1st Class, Hosp. Corps, U. S. Army, Post Hospital, Fort D. A. Russell, Wyoming, rec. by Geo. P. Chase and Arthur Neville.

No. 84. Harry Milton Jennings, Sergt. 1st Cl., Hosp. Corps, U. S. Army, Fort D. A. Russell, Cheyenne, Wyoming, rec. by Geo. P. Chase and Arthur Neville.

No. 85. Charles Lincoln Leonard, Sergt. 1st Cl., Hosp. Corps, U. S. A., Field Hospital No. 1, Fort D. A. Russell, Cheyenne, Wyoming, rec. by George P. Chase and Arthur Neville.

No. 86. Theodore Edward Rosevelt, Sgt. Hosp. Corps, U. S. A., Ambulance Co. No. 1, Fort D. A. Russell, Cheyenne, Wyoming, rec. by George P. Chase and Arthur Neville.

No. 87. William Rushby George, Sgt. 1st Class, Hosp. Corps, U. S. A., Ambulance Company No. 1, Fort D. A. Russell, Cheyenne, Wyo., rec. by George P. Chase and Arthur Neville.

No. 88. Paul Compton, Sgt. 1st Class, Hosp. Corps, Field Hospital No. 1, Fort D. A. Russell, Cheyenne, Wyoming, rec. by George P. Chase and Arthur Neville.

No. 89. Neils J. Bjork, Sgt. 1st Cl., H. C., U. S. A., Fort D. A. Russell, Cheyenne, Wyoming, rec. by George P. Chase and Arthur Neville.

No. 90. William Humphrey Smith, White Plains, N. Y., rec. by John Palmer and Hugh Craig.

No. 91. John Oliver Perry, Sgt. 1st Cl., H. C., U. S. A., 344 South Sixth street, Lebanon, Pa., rec. by W. B. Day and J. W. England.

No. 92. John Alden Bailey, 738 Fourteenth street, Denver, Col., rec. by F. W. Nitardy and E. L. Scholtz.

No. 93. Edward Eberhardt, 315 W. Sixth avenue, Denver, Col., rec. by F. W. Nitardy and E. L. Scholtz.

No. 94. Julius Leiblinger, Sgt. 1st Cl., H. C., U. S. A., Fort D. A. Russell, Wyo., rec. by Geo P. Chase and Arthur Neville.

No. 95. W. Scott Hubbard, 724 S. Ingalls

street, Ann Arbor, Mich., rec. by J. O. Schlotterbeck and J. W. England.

No. 96. Miss Jennie Rien, 211 Grant street, Portland, Ore., rec. by W. B. Day and J. W. England.

No. 97. Charles Cheves Haskell, 3033 Sutherland Ave., Indianapolis, Ind., rec. by Chas. R. Eckler and Frank R. Eldred.

No. 98. Earl Clare Ralya, 229 East Lake avenue, Seattle, Wash., rec. by Charles W. Johnson and Albert H. Dewey.

No. 99. Edward T. Yates, 809 South Sixteenth street, Omaha, Neb., rec. by Charles R. Sherman and H. C. Lane.

No. 100. James Harvey Green, 1101 S Twenty-ninth avenue, Omaha, Neb., rec. by Charles R. Sherman and H. C. Lane.

No. 101. George William Hicks, Sgt. 1st Cl., Hospital, U. S. A., Camp McGrath, Province of Batangas, P. I., rec. by W. B. Day and J. W. England.

No. 102. Walter Edwin Shiffer, Sgt. Hosp. Corps, U. S. A., Camp McGrath, Batangas, P. I., rec. by Fred Lehman and W. B. Day.

No. 103. Michael John Hogan, Sgt. H. C., U. S. A., Camp McGrath, Prov. Batangas, P. I., rec. by Fred Lehman and Wm. B. Day.

No. 104. Ernst A. Koelle, Sgt. Hosp. Corps, U. S. Army, Columbus Barracks, Columbus, Ohio, rec. by G. Cushman and Wm. B. Day.

No. 105. Fred H. McClure, Sgt. Hosp. Corps, U. S. Army, Columbus Barracks, Columbus, Ohio, rec. by G. Cushman and Wm. B. Day.

No. 106. Ed. W. Case, Main street, Picton, Ontario, Canada, rec. by H. M. Whelpley and Joseph P. Remington.

No. 107. Henry Watters, 138 Rideau St., Ottawa, Canada, rec. by H. M. Whelpley and Joseph P. Remington.

No. 108. Oscar E. Ouellette, 32 West Adams street, Detroit, Mich., rec. by Leonard A. Seltzer and Wm. A. Hall.

No. 109. L. A. Jeancon, 1032 E. Ninth avenue, Denver, Col., rec by F. W. Nitardy and Frank J. Lord.

No. 110. Edgar C. Healy, 1400 Larimer street, Denver, Col., rec. by Thomas L. Bresler and L. T. Boutwell.

No. 111. William J. Wobido, 308 W. First avenue, Denver, Col., rec. by F. W. Nitardy and A. W. Clark.

No. 112. John Warren Wolfe Worthington, State Hospital, Norristown, Pa., rec. by Charles H. LaWall and E. Fullerton Cook.

No. 113. Ira Brooke Phillips, Sgt. 1st Cl., Hosp. Corps, U. S. A., Medical Supply Depot, U. S. Army, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 114. Ray Westra, Sgt. 1st Class, Hosp. Corps, U. S. Army, Estado Mayor, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 115. Edward Daniel Gavagan, Sgt. 1st Cl., Hosp. Corps, U. S. Army, Medical Supply Depot, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 116. William Godfrey Soekland, Sgt. 1st Class, Hosp Corps, U. S. Army, Division Hospital, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 117. Jason David Byers, Sgt., 1st Cl., Hosp. Corps, U. S. Army, Medical Supply Depot, U. S. Army, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 118. Charles Gallagher, Sgt. Hosp. Corps, U. S. Army, Medical Supply Depot, U. S. Army, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 119. John Rufus Behre, Sgt. 1st Class, Hosp. Corps, U. S. Army, Division Hospital, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 120. Daniel W. Robinson, Sgt. 1st Class, Hosp. Corps, U. S. Army, Camp Treadwell, Pampamga, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 121. Charles Cooper Young, Chief Surgeon's office, Phil. Division, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 122. Edgar T. Hitch, Chief Surgeon's office, Phil. Division, Manila, P. I., rec. by Jasper M. Lawrence and Wm. B. Day.

No. 123. Victor S. Lagasse, 939 E. Eleventh avenue, Denver, Col., rec. by Chas. M. Ford and F. W. Nitardy.

No. 124. Ethel H. James, Boise Barracks, Boise, Idaho, rec. by Herman von Oehsen and Harry A. Davis.

No. 125. James Stanley O'Brien, 424 Sixth avenue, Pittsburg, Pa., rec. by J. A. Koch and Louis Saalbach.

No. 126. R. Blaine Patterson, 1313 Second street, The Dalles, Oregon, rec. by Geo. C. Blakeley and J. M. A. Laue.

No. 127. Howard Chamberlain Newton, Southboro, Mass., rec. by John G. Godding and Leon A. Thompson.

J. W. ENGLAND,
Secretary of the Council

COUNCIL LETTER NO. 11.

PHILADELPHIA, January 23, 1912.

To the Members of the Council:

Under date of January 15, 1912, the Secretary of the Council advised the Chairman of the Committee on Finance and the Treasurer of the Association that Motions Nos. 20, 21, 22, 23 and 24, relating to Budget of Appropriation for 1912 (C. L. No. 9), had each received a majority of affirmative votes.

Your Secretary had previously been advised by the Chairman of the Finance Committee of the correction of two errors in the proposed budget—one, changing the title of "Proceedings" to "Report on the Progress of Pharmacy," and the other, changing the appropriation to the Section on Historical Pharmacy from $25 to $50.

The following letter has been received from Chairman Koch, too late for inclusion in Council Letter No. 10:

"TO THE MEMBERS OF THE COUNCIL—I am informed that motions Nos. 20, 21, 22, 23 and 24 have each received a majority of affirmative votes and that the budget has been adopted with these changes. I regret that this is the case, as I do not believe that the merging of several accounts into one is to the advantage of the Association nor to the betterment of our financial methods. These, as we all know, are far from satisfactory. The greater the division of our expenditures under separate headings, the more insight we obtain. I cannot see why anyone should object to carrying a separate account under the headings of stenographers. If this item should be legitimately charged to the Journal account, which I do not by any means concede, then it is always an easy matter to ascertain the cost of the Journal to the Association by adding together the expenditures under the headings of Journal and Stenographers. The opposite, however, cannot be done. If the two accounts are merged, the cost to the Association of its stenographers can only be ascertained by going through the records of the Treasurer. Another advantage in two separate accounts is that in this case the expenditure for stenographers is limited to the amount of the appropriation, while under a merged appropriation there is no limit.

"Until comparatively recently all expenditures for the account of the National Formulary were made without any appropriation whatsoever. An appropriation was finally made. Since the revision of the National Formulary has been going on actively, and has been a source of expense to the Association, it was deemed wise by the Finance Committee to keep the expenditures incurred in revising the National Formulary separate, so that the Association should be able to determine the exact cost of revision. The other National Formulary account was for the expenses of publication and distribution. It could certainly do no harm to keep these in two accounts separate. J. A. KOCH.

"Pittsburg, January 20, 1912."

Under date of January 19, 1912, Treasurer Whelpley replies to the Secretary: "Your letter of January 15 at hand. I do not see any other course to be followed than the one you outline."

J. W. ENGLAND,
Secretary of the Council.

Obituaries and Memorials

Persons having information of the death of members of the A. Ph. A. are requested to send the same promptly to J. W. England, 415 N. 33d St., Philadelphia, Pa. Information as to the age, activities in pharmacy, family, etc., should be as complete as possible. When convenient a cabinet photograph should accompany data.

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CLIFFORD RAMSDELL.

Clifford Ramsdell, president of the Ramsdell Drug Company of New York, and a former member of the drug firm of Daggett & Ramsdell, died Saturday, December 30, 1911, from Bright's disease, at his home, 101 E. 75th St. Mr. Ramsdell was born in 1858, and graduated from the Massachusetts College of Pharmacy in 1882. With V. C. Daggett, Mr. Ramsdell in 1890 founded the drug firm of which he was a former member. He became a member of the American Pharmaceutical Association in 1907.—J. W. E.

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REUBEN D. ROBERTSON.

We are advised by A. H. Bushnell, Commanding Colonel of the Medical Corps, U. S. Army, General Hospital, Fort Bayard, New Mexico, that Reuben D. Robertson, a member of the American Pharmaceutical Association, died at that hospital on December 11, 1911, of pulmonary tuberculosis. Mr. Robertson became a member of the Association in 1911.—J. W. E.

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DEATH OF ELIEL SISTERS.

Information has just been received of the death of two sisters of the late Leo Eliel, Ex-President of the A. Ph. A. One died in October last, and the other on Christmas day.

Proceedings of the Local Branches

"All papers presented to the Association and its branches shall become the property of the Association, with the understanding that they are not to be published in any other publication than those of the Association, except by consent of the Committee on Publication."—Resolution adopted at the Boston Convention, 1911.

Reports of the meetings of the Local Branches should be mailed to the editor on the day following the meeting, if possible. Minutes should be *plainly* written, or typewritten, with wide spaces between the lines. Care should be taken to give proper names correctly, and manuscript should be signed by the reporter.

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BALTIMORE BRANCH.

The annual meeting of the Branch was held at the Department of Pharmacy of the University of Maryland on Thursday evening, January 18th. The President, Mr. C. L. Meyer, was unable to attend, and the Vice President, Mr. J. E. Hancock, occupied the chair. The first order of business was the reports of the officers.

As Chairman of the Executive Committee, Mr. Hancock reported that this Committee had arranged for the meetings of the Branch, and had attended to the other routine business.

The report submitted by the Secretary-Treasurer showed a cash balance in the treasury, and a total membership of ninety-five (95), of which seven (7) are honorary, forty-four (44) active and forty-four (44) associate members. Five business meetings were held during the year, and one joint meeting with the Medical and Chirurgical Faculty in April.

For the Committee on Professional Relations, Dr. J. F. Hancock, Chairman, said that the Committee had worked very hard to make the joint meeting with the members of the Medical and Chirurgical Faculty successful, and to further foster the spirit of fellowship and cooperation between the physicians and pharmacists of the state. He believed that the Branch had been of great service in this work.

The Committee on Membership reported that an energetic and fairly successful campaign for members had been carried on through the Chairman, Mr. Dunning. The gain in membership had more than counterbalanced the loss through deaths, resignations, etc., during the year. The Committee hopes to further increase the membership during the next year.

In the absence of their Chairmen, no reports were presented by the Committees on Education and Legislation, and on the Science and Practice of Pharmacy.

The following officers were elected:

President—E. F. Kelly.
Vice President—W. M. Fouch.
Secretary-Treasurer—E. W. Hodson.
Chairman Committee on Membership—H. A. B. Dunning.
Chairman Committee on Professional Relations—Dr. J. F. Hancock.
Chairman Committee on Science and Practice of Pharmacy—Dr. H. P. Hynson.
Chairman Committee on Education and Legislation—J. E. Hancock.

On account of the lateness of the hour, the discussion of the formulas of the new preparations proposed for admission to the National Formulary was deferred to the next meeting.

Dr. Hynson announced that this Committee would continue the work on these formulas begun at the November meeting.

Dr. J. E. Hancock referred to a movement inaugurated by the Baltimore Retail Druggists' Association to have pharmacists exempted from jury duty in Maryland. As President of the Maryland Pharmaceutical Association he had been asked to attend a meeting of the Retail Association, where this matter was discussed at some length, and steps taken to have the necessary legislation enacted at the present session of the General Assembly. The question was generally discussed, but no action was taken. Mr. Hancock was asked to cooperate on behalf of the Branch in any desirable legislation of interest to pharmacists.

After an informal discussion of the work of the Branch for the ensuing year, which will be taken up by the Executive Committee, the meeting adjourned.

The next meeting will be held on February 15th.

E. F. KELLY,
Secretary-Treasurer.

CHICAGO BRANCH.

The January meeting of the Chicago Branch of the American Pharmaceutical Association was the most largely attended and most interesting meeting of the season. It was held at the rooms of the Board of Pharmacy on Tuesday evening, January 16, and was devoted chiefly to a discussion of the progress of pharmacopœial revision.

Preliminary to taking up the program of the evening, the Nominating Committee, consisting of Messrs. Snow, Patterson and Christensen, reported the following nominations for officers, who were then unanimously elected:

President, J. H. Wells; First Vice-President, S. K. Sass; Second Vice-President, Wm. Gray; Third Vice-President, Mrs. M. M. Gray; Secretary-Treasurer, W. B. Day. Committee Chairmen: Practical Pharmacy, I. A. Becker; Medical Relations, Dr. Bernard Fantus; Publicity, Otto Bruder, and Legislation, J. P. Crowley. Council Representative, A. H. Clark

Vice-President Becker, who had taken the chair early in the evening in the absence of President Storer, then requested the Nominating Committee to bring forward the newly elected officers, and President Wells was duly installed as the presiding officer. The other officers were presented to the Branch and the meeting was then turned over to Professor Clark, who had arranged the program.

In introducing the subject, Professor Clark briefly outlined the program of the work of revision so far and made a forecast as to the possible completion of the work of the various committees. He expected to see the work of revision entirely completed within the present year. He then brought up a number of features which seemed best suited for discussion. Among these were the manner of expressing solubilities—whether the solubility is to be stated following the present custom—a given weight in a given volume—or whether the amount of the substance contained in a given volume of saturated solution should be stated or whether both substance and solvent should be stated by weight.

Doctor Fantus favored no change from the present practice, although in certain cases, such as potassium iodide, it would be an advantage to have the Pharmacopœia state the amount by weight in a given volume of a saturated solution. Mr. Paul and Mr. Stuart also thought the latter method to be preferable as being more accurate and more convenient. Mr. Wells and Mr. Storer favored the retention of the present method as being most generally adapted to the pharmacist's use. In connection with solubilities, the question of temperature and temperature determinations came up, and this brought in statements as to melting points and boiling points which were discussed by Messrs. Becker, Gray and Snow. The sentiment in favor of the retention of Fahrenheit temperature, with the centigrade temperature readings, seems to prevail. Even the strongest advocates of the metric system and the centigrade thermometer admitted that clinical thermometers were seldom or never graduated in the centigrade scale and that many physicians and even teachers in the medical schools still adhere to the old style of dosage, so that it would still be necessary to retain the equivalents for metric doses in grains and minims.

The physical constants of volatile oils were discussed by Professors Linton and Patterson and Mr. Barrett. It seemed to be the general opinion that the description of color, odor and taste, although of secondary importance to specific gravity and optical activity, should, nevertheless, be included in the Pharmacopœial descriptions.

Mr. Day spoke of the introduction of the descriptions of the powdered drugs and expressed the hope that it would be found to include a brief and general description of these powders, which would be sufficiently comprehensive to suit the purpose and yet not be so finely detailed as to become the subject of controversy and quibble.

Mr. Gathercoal spoke of the necessity of making due allowance for small quantities of inert foreign material in drugs, such as the presence of stems in leaf drugs and of attached stems in several rhizome and root drugs, and of the need of mentioning these in the powders. He also made the point that the official definition should include a statement that would make it cover the comminuted or powdered drugs as well as the whole drug in each instance so that there might be no room for evasion of the Food and Drugs Act on these points. Mr. Gathercoal then offered the following resolution, which was seconded and adopted:

Resolved, It is the sense of the meeting

that the Revision Committee should introduce such statements as shall make the official title and definition include the drug in all forms of comminution.

A vote of thanks was unanimously given to the retiring officers, and in this vote of thanks especial mention was made of President Storer, who retires from office after having served for two years.

The next meeting will be held Tuesday evening, February 20, and will be devoted to a discussion of the Revision of the National Formulary, and an exhibit of the preparations of the National Formulary will be made. The program will be in charge of Prof. C. M. Snow and the meeting will be held at the University of Illinois School of Pharmacy.

W. B. DAY, *Secretary.*

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NASHVILLE BRANCH.

The regular monthly meeting of the A. Ph. A. was held on Thursday afternoon, Dec. 14, 1911, at Furman Hall, Vanderbilt, with President J. O. Burge in the chair. The discussion of the formulas proposed for admission to N. F. IV, continued from last meeting, was again taken up and commented on as follows: It was thought that the strength of the Formic Acid used in the Compound Elixir Formates, should be stated. The 25 per cent acid was used in the sample exhibited and the quantity named in the formula was found insufficient to dissolve salts. There is no demand in this section for a preparation of this remedy, nor for its fancifully named proprietary forms.

The Elixir Cardamon Compound is a nice preparation and an agreeable aromatic.

There being so little demand for the Elixir Bitter Orange, its inclusion was thought to be superfluous—the Sweet Orange being used almost exclusively as a flavor.

There is some request for Elixir Sodium Salicylate Compound, and also for Elixir Manaca and Salicylates Compound, a formula for the latter would be welcomed in this section. The Essence of Pepsin seems to be the choice of physicians as a vehicle and its use instead of Aromatic Elixir was suggested.

The admission of too many simple vehicles should be discouraged, and the aromatic oils and spirits used directly in the preparation was suggested, as it would lessen the number of preparations required to be kept on hand by the pharmacist, and be an encouragement for the manufacture of this class of Galenicals by the retailer.

It was thought distilled water recently boiled should be specified in Liquor Sodii Chloridii, and that its admission would give a preparation of uniform strength throughout the country instead of the various strengths now used. There is no demand in this locality for Aqua Phenolata.

The question was raised as to the destroying or retarding of the action of Pepsin by the aromatics in the Liquor Pepsin Antiseptic us. This point should be tried out before its admission.

For Tincture Opii Crocata and Tincture Coculus Indicus, there is no demand whatever in this section. It was suggested that the use of Potassium Carbonate in the Tincture Larkspur made a darker and more efficacious remedy with the use of a weaker strength of alcohol.

Tincture Cactus, Tincture Passiflora and Tincture Pulsatilla each have some call in this section. The Elixir Saw Palmetto and Santal meets with considerable demand in this territory, and is considered a more desirable preparation than the tincture. No need for both preparations.

The demand for Liquor Carbonis Detergens is growing in this vicinity. It is believed that the English method of making it, with the application of heat to about 120° F. for twenty-four hours, will make a stronger and better preparation. Aromatic Castor Oil will make an acceptable additional preparation to the N. F., but it was thought Peppermint flavor would be preferable.

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PITTSBURGH BRANCH

Notwithstanding the winds that howled around the corner of the College of Pharmacy building on the bluff overlooking the raging waters of the Monongahela river, the attendance at the January meeting of the Pittsburgh Branch of the A. Ph. A. was good. In the enforced absence of the Secretary, for the first time since the organization was born, a capable substitute was found in the person of Mr. J. S. O'Brien. The annual election of officers resulted in the choice of these good men and true to keep the wheels in motion for 1912: President, Andrew

Campbell; First Vice-President, Louis Saalbach; Second Vice-President, Peter G. Walter; Third Vice-President, Leonard K. Darbaker; Secretary, B. E. Pritchard; Treasurer, P. Henry Utech. For Committee Chairmen: Membership, Charles E. Willets: Practice, F. J. Blumenschein; Medical Relations, Geo. W. Kutscher; Education and Legislation, J. H. Beal.

Dr. Blumenschein presented a formidable list of proposed deletions from the Pharmacopœia as urged by the Revision Committee, to which he strenuously objected, giving excellent reasons therefor in each instance. All of the objections were sustained, after exhaustive discussion, except the following:

Acetum Opii.—On motion of Dr. Koch, supported by Dr. Saalbach, the deletion was endorsed.

Acidum Sulphurosum.—Drs. Koch and Judd agreed that a formula for the extemporaneous preparation should be given, and it was adopted as the sense of the Branch that such action would be recommended, and the Chair appointed as a committee to formulate same, Drs. Judd, Blumenschein and Wurdack.

Cataplasma Kaolini.—On motion of Dr. Koch, supported by Dr. Blumenschein, the deletion was opposed because of the widespread use of this preparation.

Cerii Oxalis.—On motion of Dr. Judd, supported by Dr. Wurdack, deletion opposed because of the extensive use of the article by the medical profession. For similar reason the deletion of Extractum Sumbul was objected to.

On motion, the action of the Branch was referred to the Secretary, with instructions to transmit the same to the Chairman of the Revision Committee.

The Chairman of the committee to which the proposed new formulas for introduction into the National Formulary, Dr. Koch, submitted a partial report, in which he called attention to the statement contained in the letter from the National Formulary Committee to the Branches that it was not comments based upon theory that was wanted, but that pharmacists try the formulas out, make the various preparations, and then submit suggestions as to improvements or objections to the formulas from a practical standpoint. The only questions we are asked to pass upon are: Are they stable preparations, and, perhaps, are they ethical? But even that may be barred under the literal meaning of the committee's request. The members have made but a few of the proposed preparations and they were especially the elixirs. In some of the elixirs, Dr. Emanuel suggests that the per cent of alcohol is not sufficient to prevent fermentation in the presence of so large a quantity of syrup, and recommended that the latter be replaced by glycerin.

In the same connection, on the other hand, Dr. Blumenschein suggests that a less radical change in formula would be to use sugar and water, in lieu of syrup, arguing that if syrup is to be used in the manufacture of elixirs it is folly to first prepare the syrup and then mix this with the other liquids, when a much better result would be obtained by using the equivalent amount of sugar (85 gm. for each 100 Cc. of syrup) and the addition of more water.

Further commenting upon the subject of elixirs, Dr. Blumenschein presents some practical points for consideration as follows:

A consideration of the principles of pharmacy should be observed before submitting any formula for trial and comment. One point which was presented in a paper read at the 1908 convention of the A. Ph. A., and has since been discussed before this Branch, and which seems to have escaped the notice of pharmacists generally, is this, having a solution of a substance endeavor to keep it in solution, or if it does precipitate, have conditions right for insuring its solution again effected. For example, in all of these formulas the solutions of volatile oils are directed to be mixed with the aqueous liquid, and then kieselguhr or talc is to be added. This process renders it difficult to secure a clear filtrate, with the unfortunate result that druggists buy these preparations ready made.

On motion of Dr. Koch, the following recommendations were adopted:

That the members of the Pittsburg Branch are not able to pass upon the keeping qualities of these low alcoholic elixirs, but that they presume that this has been thoroughly tested out and they would offer as a suggestion that *sugar* be used instead of *syrup* in making all of the N. F. Elixirs. That in the working directions for these elixirs, the operator be instructed to mix the oils with the alcohol and flavoring agents with the kieselguhr, talcum or other filtering medium, and sugar, and then the aqueous liquid added. That synthetic oil neroli be

used instead of orange flower water. Elixir Formatum, that the formula for this be made to use Potassium Bicarbonate, Sodium Carbonate and Formic Acid instead of the salts now used.

Concerning Compound Spirit of Cardamom, inquire of N. F. Committee the object of inserting 1 Cc. of alcohol in the preparation.

Elixir Vanillin Compound, that on account of liability of its being mistaken for Extract Vanilla, the caramel be omitted.

Gargarysma Guaiac Compound, that we recommend the addition of 1 gram Tragacanth to the formula.

Tincture Larkspur, the formula to be changed by the addition of Acetic Acid 36 per cent, 100 parts, and the use of dilute Alcohol to make 1000. That it be made by maceration instead of percolation.

Tinctures of Pulsatilla and Passiflora, the use of the fresh instead of the dried herb.

In the proposed formula for Physiological Salt Solutions, specific reference be given to some authoritative method of sterilization.

A motion prevailed providing for the distribution of a number of proposed formulas among the members, with the request that they present specimens thereof at the next meeting.

B. E. PRITCHARD, *Secretary.*

Changes of Address

All changes of address of members should be sent to the General Secretary promptly.

The Association will not be responsible for non-delivery of the Annual Volume or Year Book, or of the JOURNAL unless notice of change of address is received before shipment or mailing.

Both the old and the new address should be given, thus:

HENRY MILTON,
From 2342 Albion Place, St. Louis, Mo.
To 278 Dartmouth St., Boston, Mass.

Titles or degrees to be used in publications or in the official records should be given, and names should be *plainly* written, or typewritten.

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DR. BYRON F. DAWSON,
From San Luis Obispo, Calif.
To Rural Route No. 1, Box 77, Modesto, Calif.

JOHN J. MCCLUGAGE,
From 511 E. 63d St., Chicago, Ill.
To 1140 E. 63d St., Chicago, Ill.

CHARLES GIETNER,
From 300 S. 14th St., St. Louis, Mo.
To 3340 S. Grand Ave., St. Louis, Mo.

FRED W. TREBER,
From 3010 W. Broadway, Louisville, Ky.
To 3d St. and Broadway, Louisville, Ky.

HENRY BIROTH,
From 947 E. 37th St., Chicago.
To 130 Vermont St., Blue Island, Ill.

RICHARD L. NOAKS,
From 1915 Hyde St., San Francisco, Cal.
To Teralta, P. O. San Diego Co., Cal.

HENRY A. BRADSHAW,
From 39 S. 10th St., Philadelphia, Pa.
To 2423 Wharton St., Station D., Philadelphia, Pa.

EDWARDS F. WINSLOW,
From 2420 Callow Ave., Baltimore, Md.
To 1046 Lancaster Ave., Bryn Mawr, Pa.

SIDNEY C. YEOMANS,
From 3360 State St., Chicago, Ill.
To Signal Hill, Long Beach, Cal.

DAVID V. WHITNEY,
From 3722 E. 12th St., Kansas City, Mo.
To 3401 E. 12th St., Kansas City, Mo.

CHARLES TRUAX,
From 42 Wabash Ave., Chicago, Ill.
To 116 and 118 South Michigan Ave., Chicago, Ill.

DECEASED.

CLIFFORD RAMSDELL,
763 Fifth Ave., New York, N. Y.

WILLIAM H. GALE,
1053 N. 63d St., Chicago, Ill.

SAMUEL LOUIS RUMSEY,
Ft. and Hotel Sts., Honolulu, Hawaii.

WHAT TO GET FROM LIFE.

"Failure is often the turning-point, the pivot of circumstance that swings us to higher levels. It may not be financial success, it may not be fame; it may be new draughts of spiritual, moral or mental inspiration that will change us for all the later years of our life. Life is not really what comes to us, but what we get from it."—*William George Jordan.*